

# Volume 3

**Pages 491 - 688**

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

Before The Honorable Jacqueline Scott Corley, Judge

FEDERAL TRADE COMMISSION,

Plaintiff,

VS.

MICROSOFT CORPORATION, et al., )

Defendants.

NO. C 23-02880 JSC  
SEALED PAGES 495-520

San Francisco, California

Tuesday, June 27, 2023

TRANSCRIPT OF EVIDENTIARY HEARING PROCEEDINGS

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United States District Court - Official Reporter

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Tuesday - June 27, 2023

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P R O C E E D I N G S

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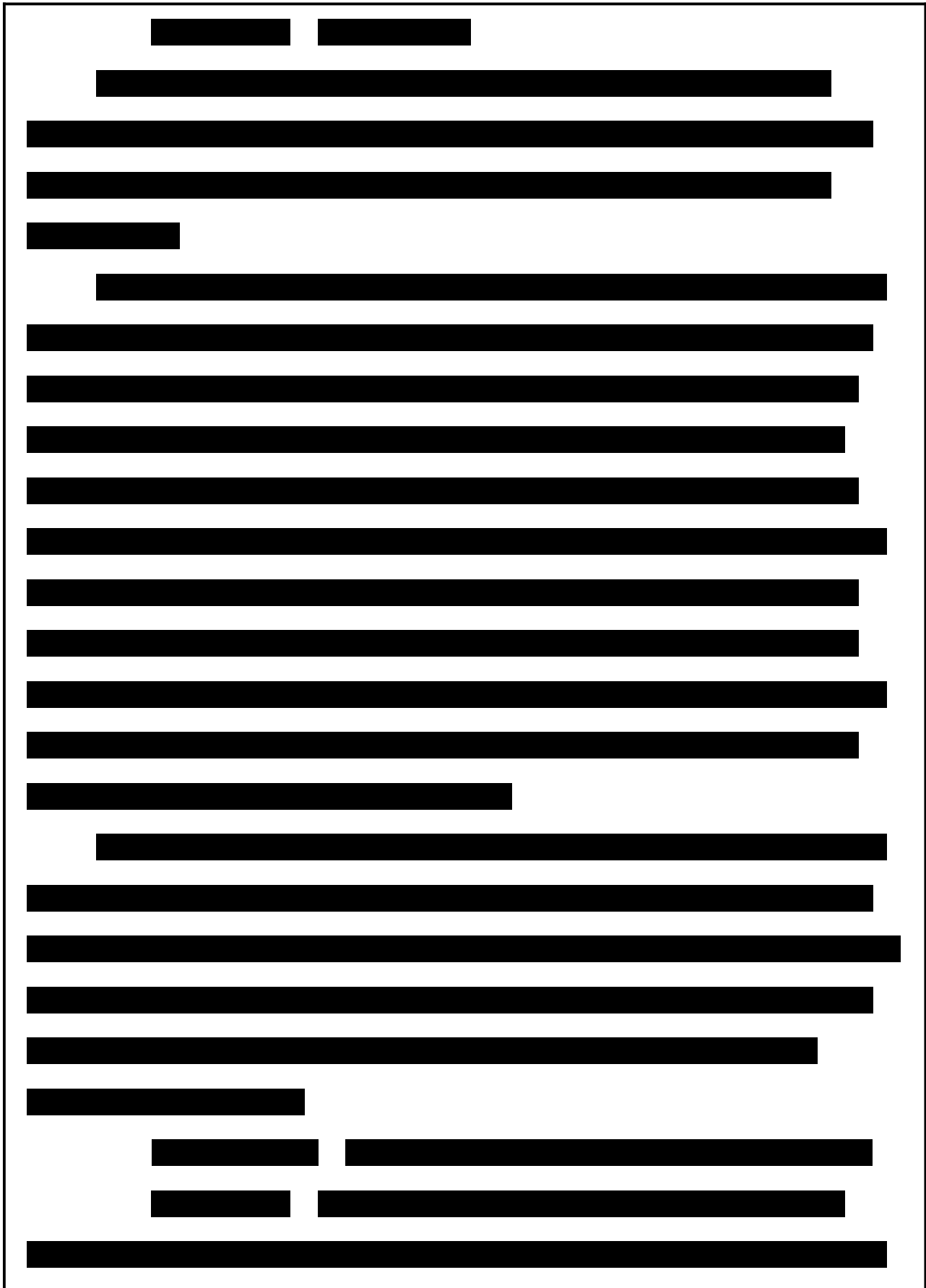
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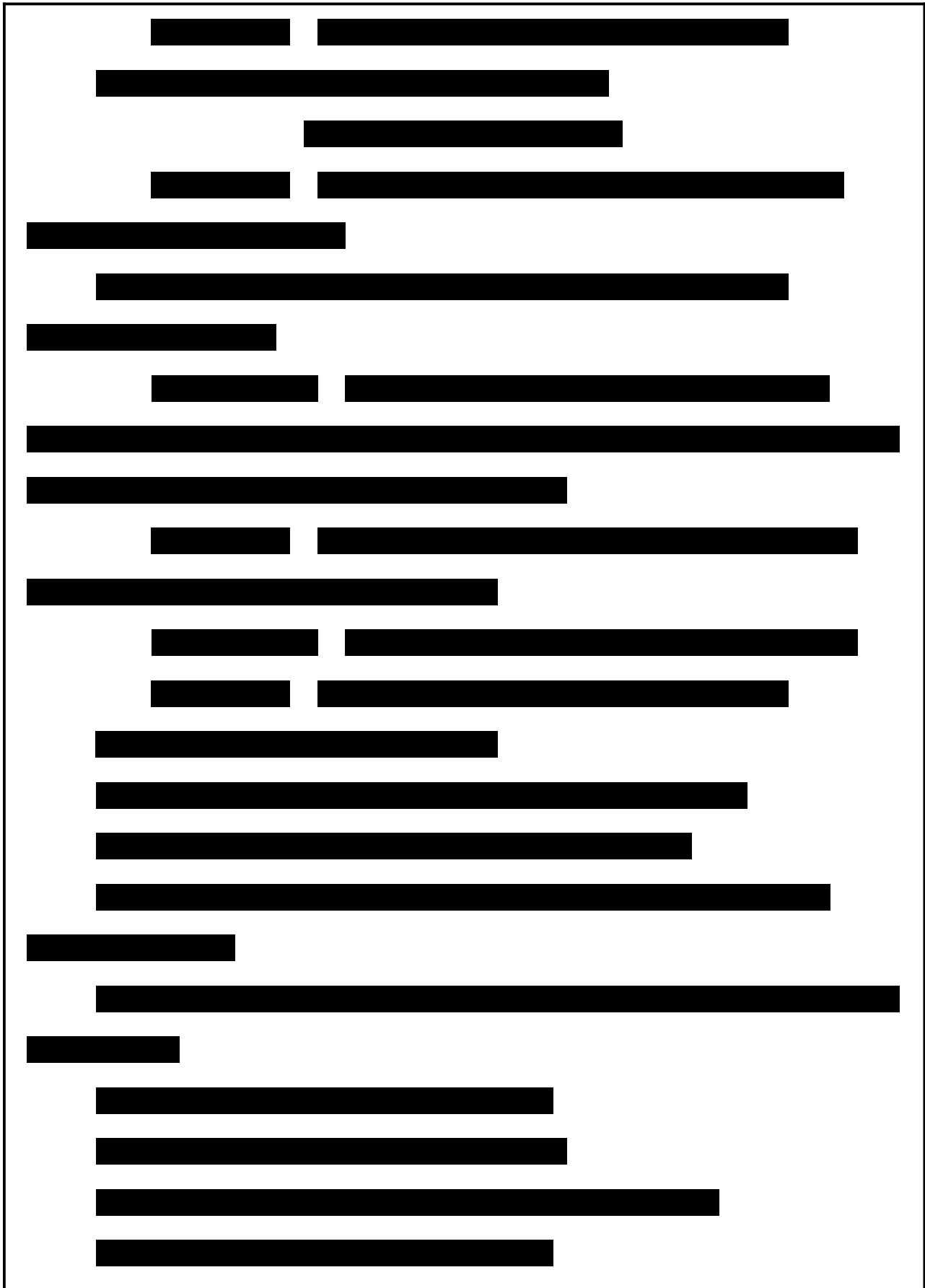






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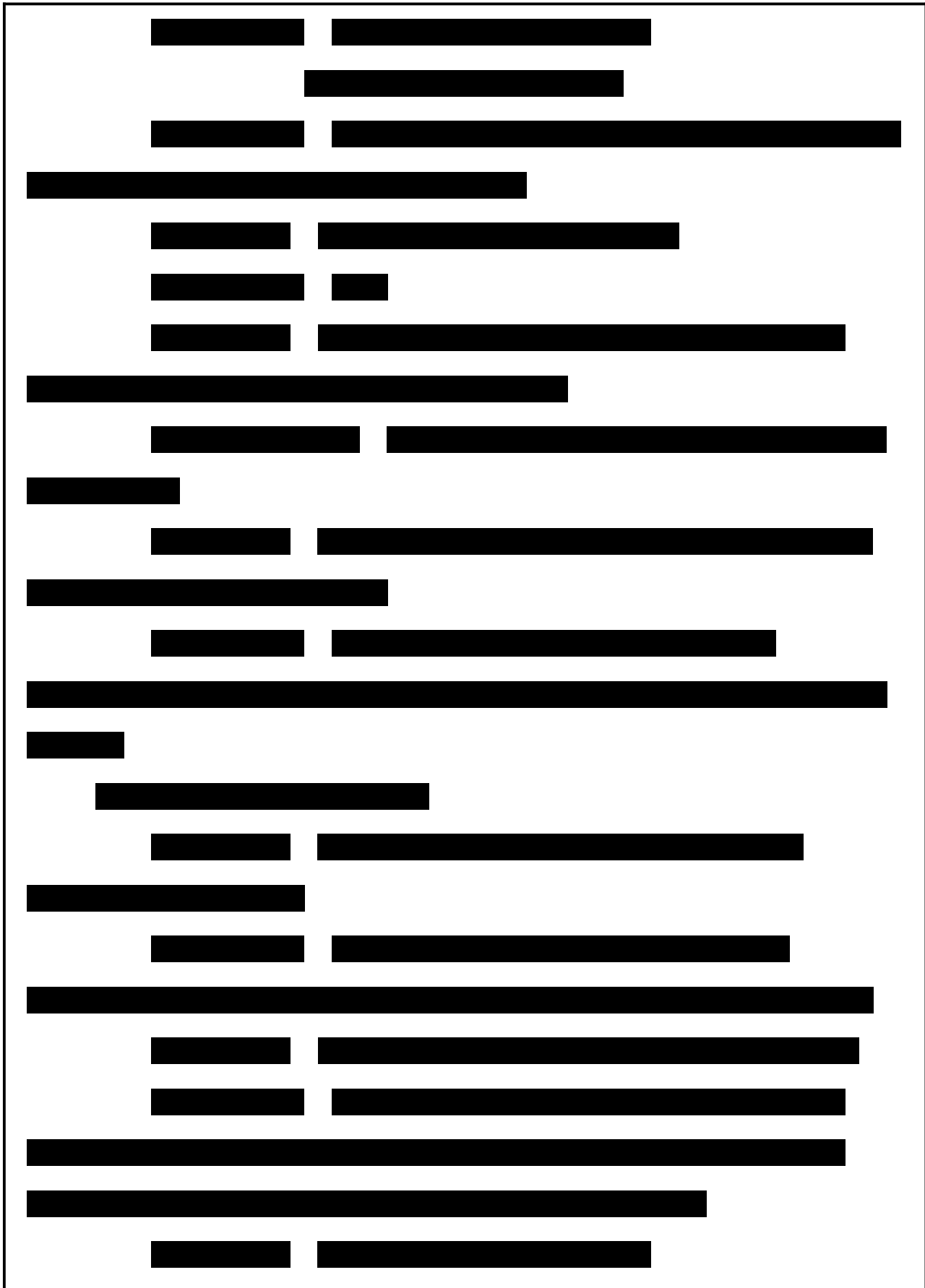


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(The following proceedings were heard in open court:)

**THE COURT:** All right. Before we begin with the evidence this morning, I do -- we are actually streaming these proceedings by Zoom audio. We have a license for 1,000 people to listen.

This is something that we've -- the pandemic created the

## PROCEEDINGS

1 need for and that we're very much hoping to continue to do it  
2 because it increases access to the public.

3 As anyone who clicks on the link knows, though, you are  
4 strictly prohibited from copying the audio, from recording it,  
5 and that includes live streaming it, and it has been brought to  
6 our attention that at least one person was live streaming the  
7 audio last week. When you do that, what you are doing is  
8 jeopardizing the ability of us to even offer the live audio  
9 Zoom at all.

10 Prior to the pandemic if you wanted to watch or listen to  
11 a court proceeding, you had to come to the courtroom and that  
12 was the only way to do that. I very much want to continue this  
13 public access.

14 My understanding is we are using our full license; but for  
15 those of you who have recorded or live streamed it, you are  
16 jeopardizing that, and probably not just for this proceeding  
17 but for all proceedings across the United States if you  
18 continue to do that.

19 So I'm just reminding all of you on the Zoom audio that  
20 you are strictly prohibited from recording or live streaming  
21 these proceedings. You are welcome to live blog, that is fine,  
22 but no recording or streaming.

23 All right. Thank you.

24 Mr. Weingarten, is the FTC prepared to present your next  
25 witness?

1           **MR. WEINGARTEN:** Yes, we are, Your Honor.

2           The FTC calls Mr. Jim Ryan of Sony. His testimony will be  
3 presented by video deposition designation. My colleague,  
4 Meredith Levert, will be handling any of the administrative  
5 aspects.

6           And I believe the Defendants have the tape to hit play.

7           **THE COURT:** All right. I know there are some people  
8 sitting in the front row. You're not going to be able to see  
9 the depo. If you want, you're welcome to come sit in the jury  
10 box where, I believe, it will be in the screens there as well  
11 if you can't get to a seat in the back where the video displays  
12 are.

13           **MS. BENNETT:** Your Honor, do you mind if I --

14           **THE COURT:** You may, Ms. Bennett, yeah, of course.

15           **MS. LEVERT:** Meredith Levert for the FTC. Good  
16 morning again, Your Honor.

17           As my colleague Mr. Weingarten just said, we're calling  
18 Mr. Ryan by deposition video. The video will include  
19 designations from both sides that are not in camera. The video  
20 runs approximately one hour and ten minutes.

21           The parties will also provide the Court with an in-camera  
22 version of the video for Your Honor to view in chambers.

23           And I believe in your binders up there that you should  
24 have a transcript of both the public video and the in-camera  
25 video.



1           **THE COURT:** Great. Thank you.

2           And just so the audience knows, we have -- there will be  
3           some jumpy things because those portions that have been  
4           designated confidential have been edited out of the deposition  
5           that is being shown here in the courtroom.

6           **MS. LEVERT:** Thank you, Your Honor.

7           I think we can start the video.

8           **THE COURT:** Start the video.

9                     (Video was played but not reported.)

10          **THE COURT:** That concludes the testimony.

11          How do you want to go about admitting the exhibits?

12          **MS. LEVERT:** That's what I was going to do,  
13          Your Honor.

14          **THE COURT:** Do you have a list?

15          **MS. LEVERT:** Yes, we have a list of Plaintiff's  
16          exhibits.

17          **THE COURT:** And does Microsoft have a list as well?  
18          We can just read them into the record.

19          All right. FTC, so why don't you list the exhibits you  
20          want admitted.

21          **MS. LEVERT:** Certainly, Your Honor. Do you want me to  
22          just list the exhibit numbers or describe what they are?

23          **THE COURT:** No, no. Just the number.

24          **MS. LEVERT:** Okay. Excellent.

25          PX8001, PX3109, PX3106, PX3110. And we would also like to

1 move to admit the underlying Jim Ryan deposition transcripts.  
2 Those are PX7053 and PX7054.

3           **THE COURT:** Okay. Those are all admitted.  
4 (Trial Exhibits 3106, 3109, 3110, 7053, 7054, and 8001  
5 received in evidence.)

6           **MR. KILARU:** We have a few more. PX3106.

7           **THE COURT:** She mentioned that one.

8           **MR. KILARU:** Okay. Sorry. 3109.

9           **THE COURT:** Okay. She also mentioned that one.

10          **MR. KILARU:** Sorry. 3110.

11          **THE COURT:** Not -- you struck out.

12          **MR. KILARU:** All right. I'll keep trying. I only  
13 have a few more.

14 I believe 8001 was already in; is that right?

15          **THE COURT:** Already in.

16          **MR. KILARU:** RX0020.

17          **THE COURT:** Okay.

18          **MR. KILARU:** RX0070, RX0079, RX1162, RX2064, and  
19 RX2163. And I guess the RX should have been a clue.

20          **THE COURT:** Okay. Those are all admitted as well.  
21 (Trial Exhibits 0020, 0079, 1162, 2064, 2163 received  
22 in evidence.)

23          **THE COURT:** All right. Ms. Knox, are you okay just to  
24 go?

25 Is everyone okay to just go since you weren't -- you were

1 working but not the same way.

2 Ms. Means, are you okay if we just go?

3 All right. Is the FTC prepared to call your next witness?

4 **MR. WEINGARTEN:** Yes, we are, Your Honor.

5 The Federal Trade Commission is going to call Professor  
6 Robin Lee. Professor Lee's direct testimony is being presented  
7 by written declaration.

8 But, Dr. Lee, if you could please come to the stand.

9 **THE COURT:** Professor Lee's testimony has come in by  
10 declaration so we're going to start with the cross-examination  
11 of Professor Lee, and then we'll move to the redirect.

12 **MS. WILKINSON:** Your Honor, I'm going to be doing the  
13 cross. And if we could, I'd need a short --

14 **THE COURT:** You may have a short break, yes.

15 **MS. WILKINSON:** Thank you.

16 **THE COURT:** All right. Professor Lee, we'll just --  
17 take a five-minute break.

18 **THE WITNESS:** Thank you.

19 **THE COURT:** Okay.

20 (Recess taken at 10:07 a.m.)

21 (Proceedings resumed at 10:13 a.m.)

22 **THE COURT:** All right. Professor Lee, we're going to  
23 place you under oath.

24 **THE CLERK:** Can you please raise your right hand?

25 \\\

ROBIN LEE,

called as a witness for the Plaintiff, having been duly sworn,  
testified as follows:

**THE CLERK:** Thank you.

Can you please state your name for the record.

**THE WITNESS:** My name is Robin Lee.

**THE CLERK:** Thank you.

**CROSS-EXAMINATION**

**BY MS. WILKINSON:**

**Q.** Good morning, Dr. Lee?

**A.** Good morning.

**Q.** Do you like to be called doctor or professor?

**A.** Professor would be nice. Thank you.

**Q.** Perfect.

In this case you were hired by the FTC to analyze some of  
the economic consequences of the transaction; correct?

**A.** I was retained by the FTC to analyze the competitive  
effects of the proposed transaction.

**Q.** Is there a difference between retained and hired?

**A.** I just was -- I was retained by the FTC.

**Q.** As part of your work, you reviewed many of the documents  
in this case; correct?

**A.** Correct.

**Q.** You couldn't have reviewed every document; right?

**A.** It's my understanding there were many, many documents. I

1 did not review all of the documents that were produced.

2 Q. When you came to your conclusions, you tried to look for  
3 documents that were relevant or could support or contradict  
4 your conclusions; correct?

5 A. That is correct. I tried to look at the totality of  
6 evidence, evidence that pointed in different directions.

7 Q. You didn't just look at evidence that supports your  
8 conclusions; right?

9 A. I tried to look at all the evidence that I reviewed.

10 Q. I think I asked you a different question.

11 A. Oh. Including evidence that pointed in different  
12 directions, that is correct.

13 Q. You did do that; right?

14 A. I did do that.

15 Q. And that's important to do; correct?

16 A. I believe it is important to do.

17 Q. You also agree it's important to consider what the  
18 executives who run these businesses are saying about some of  
19 the issues on which you have opined?

20 A. I believe it's important to consider all evidence,  
21 including that.

22 Q. Now, let's start with your market definition. Okay?

23 You have said that the market in this case should be  
24 high-console -- I mean, high-performance consoles which are  
25 only the Sony PlayStation and the Xbox X and S; right?

1   **A.**    I defined two markets that involve consoles; one as you  
2   characterize as the high-performance video game consoles market  
3   with Xbox series and PlayStation 5 console and a broader market  
4   including all video game consoles.

5   **Q.**    But most of your analysis is focused on that more narrow  
6   market; right?

7   **A.**    As it pertains to these two console markets, my analysis  
8   applies to both.

9   **Q.**    Okay.   So when you ran your models, you used both markets  
10   when you were talking about the Switch and market share?

11   **A.**    Well, some of my competitive analysis focused on  
12   competition between Xbox series and PlayStation 5.   I noted  
13   that competitive harms that could arise would also occur in  
14   this broader market that also contained the Switch.

15   **Q.**    But when you did your modeling in your economic  
16   quantitative analysis, you did not put Nintendo into the market  
17   when you were assessing those issues; right?

18   **A.**    So for some of my quantitative analyses I focused on  
19   products that were only available on PlayStation and Xbox  
20   consoles, like Call of Duty; and for that, that is correct, the  
21   Switch was not included.

22   **Q.**    So you agree that Nintendo is in the market of consoles  
23   for this case?

24   **A.**    So, again, I presented two relevant product markets that  
25   contain video game consoles.   One is a broad video game

1 consoles market with the Switch and the other is one that's  
2 ordinarily focused on Generation 9 consoles.

3 **Q.** So Her Honor has to make the decision which market do you  
4 think is the proper market to consider in this case.

5 **A.** I think it's important to understand the role of market  
6 definition. It's to focus attention on where competitive  
7 effects may occur, and there need not be a single market to use  
8 when evaluating these competitive effects.

9 Again, the purpose is to highlight where, again,  
10 competitive effects, competitive harm to benefits could occur,  
11 and so that's why in my report I found it appropriate to find  
12 multiple markets. I find two that have consoles and I define  
13 three that contain subscription services and cloud streaming  
14 services.

15 **Q.** Do you think that Nintendo is a close competitor to the  
16 PlayStation 5?

17 **A.** It's hard to know what you mean by "close." I believe  
18 that there is some substitution in that some consumers may  
19 elect to buy a Switch instead of a PlayStation.

20 **Q.** So you really can't say whether it is a close competitor  
21 or it is not?

22 **A.** Well, for the purposes of market definition, the economic  
23 framework that is used is the hypothetical monopolist test. It  
24 asks: If a set of products can be monopolized by a single firm  
25 would that firm likely increase prices by a small but

1 significant amount, maybe 5 percent?

2 And that's the framework I use to evaluate whether  
3 Generation 9 consoles are a relevant antitrust product market.  
4 So if there is substitution to the Switch, I provided evidence  
5 that that substitution wouldn't likely constrain a single firm  
6 that owned PlayStation 5 and series consoles from implementing  
7 a price increase.

8 **Q.** Professor Lee, you didn't consider the Nintendo Switch  
9 when you did your diversion analysis for the hypothetical  
10 monopolist test; right?

11 **A.** So the hypothetical monopolist test was a framework I used  
12 to define all of my markets, and it can be implemented both  
13 using qualitative and quantitative evidence.

14 And I presented considerable amount of evidence that  
15 supports the conclusion that the Switch would not constrain a  
16 price increase of a hypothetical monopolist owning Generation 9  
17 consoles.

18 **Q.** That was in the console market, right, the general console  
19 market? It wasn't in the high-performance console market;  
20 right?

21 **A.** So maybe I misunderstood your question. Would you be able  
22 to repeat it, please?

23 **Q.** Sure. Let me go at it a different way.

24 In the high-performance console market you defined, you  
25 did not consider Nintendo part of that market; right?



1     **A.**     Correct.

2     **Q.**     Yes or no, Doctor.

3     **A.**     Yes, the Switch is outside of the high-performance video  
4     game consoles market.

5     **Q.**     So you don't believe it is a close competitor in that  
6     market?

7     **A.**     I wouldn't use that language. What I conclude is that a  
8     Switch would not likely constrain an exercise of market power  
9     of a firm that owned all Generation 9 consoles, all  
10    high-performance video game consoles.

11    **Q.**     You don't believe that Nintendo is a principal rival for  
12    Microsoft's Xbox, the current generation and the current  
13    generation of PlayStation; right?

14    **A.**     As an economist, it's difficult to be precise about what  
15    that language means, and that's why I'm giving a more formal  
16    economic framework to be more specifics about what it means for  
17    products to be close substitutes or primary constraints on --

18    **Q.**     So did you consider what -- did you finish? I don't want  
19    to cut you off.

20    **A.**     Yes. Thank you.

21    **Q.**     Did you consider what Sony has said about whether Nintendo  
22    is a principal rival or a close competitor?

23    **A.**     I have considered quite a bit of evidence, including what  
24    industry participants have said.

25    **Q.**     Did you consider that specific statement that the

1 Nintendo Switch is a principal rival of Microsoft's Xbox  
2 console and Nintendo's -- and Sony's PlayStation 5?

3 **A.** I can't recall that statement directly nor the context in  
4 which it was made. "Rival" can mean many things. As I noted,  
5 antitrust product markets don't need to contain all substitutes  
6 for it to be supported.

7 **Q.** You would expect when a company submits documents to a  
8 regulator about what the market is and who their competitors  
9 are, you would expect them to be accurate if you were reading  
10 those documents; right?

11 **A.** I wouldn't have a reason to believe otherwise.

12 **Q.** Let's take a look at RX2069 if we could.

13 **MS. WILKINSON:** And, Your Honor, this is a redacted  
14 document, but the portion I'm going to show is public.

15 **THE COURT:** Okay.

16 **BY MS. WILKINSON:**

17 **Q.** So if you could take a look at that. It's RX2069. Take a  
18 look in your notebook.

19 **A.** Okay.

20 **Q.** Do you see 2069? Did you find that?

21 **A.** Is it on top of the divider or below the divider?

22 **Q.** It's normally below the divider, and it says "Sony  
23 Interactive Entertainment's acquisition of Bungie."

24 **A.** I see that.

25 **Q.** And it's dated February 11th, 2022; correct?

1 A. Yes, I see that.

2 Q. You know that Sony acquired Bungie?

3 A. I recall that, yes.

4 Q. And you know Bungie is a studio that develops games;  
5 correct?

6 A. Yes.

7 Q. And you understand that sometimes, like in this case,  
8 companies have to submit filings to a regulator to describe the  
9 basis of their transaction and why it is not anticompetitive;  
10 correct?

11 A. That's my understanding, that they submit filings to  
12 regulators.

13 Q. And you understand that in today's world they submit them  
14 to foreign regulators and U.S. regulators; right?

15 A. Yes.

16 Q. And you would expect those submissions to be accurate  
17 regardless of where they were submitted; right?

18 A. I would expect that to be true.

19 Q. And when you're reading them, you would think they were  
20 accurate unless someone told you otherwise?

21 A. I wouldn't have a reason to believe otherwise.

22 Q. Okay. So when you look at this document -- go to page 4,  
23 please, and we're going to show you Footnote Number 19.

24 MS. WILKINSON: If we could publish that.

25 \\\

1 **BY MS. WILKINSON:**

2 **Q.** And this is Sony writing to the CMA; right? Look at the  
3 front cover if you have any question.

4 **A.** I believe -- I believe it is, yes.

5 **Q.** And you see there in Footnote 19 they're talking about the  
6 PlayStation sales in the U.K., right, for 2020? Do you see  
7 that?

8 **A.** I see that.

9 **Q.** And it said its principal rivals were Microsoft Xbox and  
10 Nintendo Switch console; right?

11 **A.** I see that.

12 **Q.** And in 2021 they say again those rivals are -- and how the  
13 shares changed -- Microsoft and Nintendo Switch; correct?

14 **A.** I see that.

15 **Q.** And did you consider that when you were coming to your  
16 determination about whether Nintendo should be considered a  
17 principal rival or a close competitor?

18 **A.** I don't recall this precise document, but I have seen  
19 documents that indicated similar or used similar language to  
20 describe Switch versus Gen 9.

21 **Q.** You don't challenge the accuracy of that; right?

22 **A.** Of?

23 **Q.** Sony's filing to its regulator.

24 **A.** I do not challenge this finding.

25 **Q.** Okay. Take a look now at -- also on page 4, and we're

1 going to show you paragraph 19. Do you see that?

2 And we can show that because that's also not confidential.

3 Do you see that?

4 **MS. WILKINSON:** You can publish that, please.

5 **THE WITNESS:** I see paragraph 19, yes.

6 **BY MS. WILKINSON:**

7 **Q.** And here, Sony is talking about who its storefronts  
8 compete with; right?

9 **A.** Yes.

10 **Q.** And "storefronts" means when they do buy-to-play, who are  
11 their competitors; right?

12 **A.** I believe so.

13 **Q.** And they say that includes those operated by Nintendo and  
14 Microsoft; right?

15 **A.** I see that, yes.

16 **Q.** And if you look below, it says also subscription services;  
17 right?

18 **A.** Yes, I see that.

19 **Q.** And when you considered the market definition for  
20 consoles, you have considered subscription services a separate  
21 market; right?

22 **A.** I supported the conclusion that there is a separate market  
23 containing content library subscription services.

24 **Q.** You agree, though, that PlayStation does compete against  
25 other people's -- or other company's subscription services;

1 right?

2 **A.** I think the language "competes" means that there is some  
3 perhaps degree of substitution; and as I noted before, a  
4 relevant antitrust product market does not need to contain all  
5 substitutes. The purpose is to focus attention on the closest  
6 substitutes, those that would meaningfully constrain an  
7 exercise of market power.

8 **Q.** Dr. Lee, you understand I'm asking you questions. If you  
9 could answer the questions, then your Counsel then can let you  
10 explain. Do you understand that?

11 **A.** Yes.

12 **Q.** Okay. So let's take a look now at -- this is going to be  
13 under seal, but it was mentioned in the last deposition with  
14 Mr. Ryan -- look at RX0020. I believe it's in the notebook.

15 And this is Sony's contract with Activision regarding Call  
16 of Duty; right?

17 **A.** That's what it says.

18 **Q.** And you see in this contract Sony specifically defines who  
19 their competitor platforms are; correct?

20 **A.** Could you please point me to a page?

21 **Q.** Of course. It's just going to be on page 01 -- 001. Go  
22 down to the bottom and it says this -- part I can read --  
23 "Competitive platform means..."

24 **A.** (Witness examines document.) I see that.

25 **Q.** So they are telling Activision who they think the

1 competitive platforms are for purposes of this contract; right?

2 **A.** I -- I'm not a lawyer, but I see those terms there next to  
3 that phrase.

4 **Q.** Okay. And you see how it identifies different platforms?

5 **A.** I do see that.

6 **Q.** Do you disagree with this characterization of what a  
7 competitive platform is for Sony? Just do you agree or  
8 disagree?

9 **A.** I'm not sure how the phrase "competitive platform" is  
10 being used. As an economist, I have a way that competition  
11 is -- or how economists think about competition.

12 Here, I'm not disagreeing that it states for the purposes  
13 of this contract, I believe, "competitive platform" means  
14 what's listed after that.

15 **Q.** Okay. First of all, you know this whole case is about  
16 competition; right?

17 **A.** I understand competition is part of this case, yes.

18 **Q.** And how the people who run the business actually consider  
19 whether -- what their competition is or who their competition  
20 is; right?

21 **A.** I understand that.

22 **Q.** So we were looking at that document, the contract, to say  
23 that's who Sony lists. And all I said to you is: Do you agree  
24 with that, that you think those are also competitors?

25 I'm not asking you whether you agree. That's what they

1 wrote. I'm asking if you agree that those are competitive  
2 platforms to Sony's PS5.

3 **A.** I haven't conducted analysis for all the devices that are  
4 listed here in this paragraph.

5 **Q.** So you can't say?

6 **A.** I don't have an opinion at this moment.

7 **Q.** You don't include PC as a competitive platform; correct?

8 **A.** I don't use the phrase "competitive platform" in my  
9 analysis.

10 **Q.** You don't include them in your market definition, correct,  
11 for consoles?

12 **A.** For my two console markets, PCs are excluded.

13 **Q.** Now take a look at -- this is the transcript that --  
14 confidential portion of Mr. Ryan's transcript that was not  
15 played but is submitted to the Court, and it's PX7053 at  
16 page 29.

17 (Pause in proceedings.)

18 **MS. WILKINSON:** Actually, I think that portion was  
19 read.

20 **THE WITNESS:** Can you please repeat the page number?

21 **THE COURT:** It's not there.

22 **MS. WILKINSON:** Page 29, lines 27 through 22.

23 **THE COURT:** The deposition?

24 **MS. WILKINSON:** Excuse me. 17 through 22.

25 Sorry, Professor, we're trying to be very careful, as I



1 know you are, about the confidential information. I thought  
2 that portion was read. Let me just check.

3 **THE COURT:** The page is not in here.

4 **MS. WILKINSON:** It's not?

5 **THE COURT:** The -- no. We start with page 186.

6 **MS. WILKINSON:** I'm sorry, Your Honor. Let me see if  
7 I can -- if we have a full transcript.

8 (Pause in proceedings.)

9 **MS. WILKINSON:** Why don't we check on that,  
10 Your Honor. I will move on.

11 **BY MS. WILKINSON:**

12 **Q.** I'll try to ask you a more general question.

13 Did you consider what Mr. Ryan said about whether PC is a  
14 competitor?

15 **A.** I did review his testimony and considered that statement.

16 **Q.** Okay. And you still didn't include PC as a competitor to  
17 the consoles?

18 **A.** PCs are not in the relevant antitrust markets that are  
19 defined which contain consoles.

20 **Q.** Okay. Great.

21 Now, let's talk more generally about what you did in this  
22 case and what you did not do.

23 You did some quantitative modeling in this case; right?

24 **A.** Yes.

25 **Q.** And you also made statements about what you thought about

1 whether COD was important to competition; right?

2 **A.** Yes. I -- I provided opinions about the importance of the  
3 impact that Call of Duty could have on competition in the  
4 relevant markets.

5 **Q.** You said specifically that COD -- and we're always meaning  
6 Call of Duty, right, when we talk about that?

7 You specifically say COD is important to competition;  
8 right?

9 **A.** I believe I used the phrase "can meaningfully affect  
10 demand and competitiveness" in the consoles market. I don't  
11 remember that precise language.

12 **Q.** Do you remember being deposed a few days ago?

13 **A.** Yes. So I'm -- I don't disagree with the  
14 characterization. That is important for competitiveness.

15 **Q.** And you said it was important; right?

16 **A.** I -- I don't recall the exact language, but I believe I  
17 could have used those words.

18 **Q.** You do not take the position that COD is essential  
19 content; correct?

20 **A.** I don't express the opinion that it's essential as in it's  
21 required to produce a viable product in the console markets.

22 **Q.** So you did not take the position that it is essential;  
23 correct?

24 **A.** Correct.

25 **Q.** And you say there are other video games that are also

1 important to competition; right?

2 **A.** There are other video games that can affect competition.

3 **Q.** COD is not the only video game that's important to  
4 competition?

5 **A.** Again, there are other video games it also can affect --  
6 easily affect competition.

7 **Q.** FIFA, is that an important game to competition?

8 **A.** I haven't conducted the analysis of that particular game,  
9 but it's my understanding it's a very popular game and likely  
10 would have meaningful effects on demand and competition.

11 **Q.** You're not suggesting that you did an economic  
12 quantitative assessment to determine whether COD itself was  
13 important to competition, did you?

14 **A.** I'm sorry. I didn't follow the question.

15 **Q.** You didn't -- your models don't specifically address  
16 whether COD is important to competition? Did you make a model  
17 that produces that result?

18 **A.** I think that determination is -- arises from an evaluation  
19 of the totality of evidence that I reviewed.

20 **Q.** Okay. So you looked at other games in the market?

21 **A.** I did examine other games in the market.

22 **Q.** So is FIFA important to competition?

23 **A.** I don't recall the precise characteristics of FIFA at this  
24 moment.

25 **Q.** Are the Madden games important to competition?

1   **A.**   I believe large franchises with a significant number of  
2   sales and consumers can meaningfully affect competition and  
3   demand in the console markets.

4   **Q.**   So PlayStation's first-party exclusive game God of War  
5   Ragnarök is important to competition; correct?

6   **A.**   I will say that titles with large sales as I just said.  
7   If God of War Ragnarök does have those characteristics and  
8   people really value it, it can meaningfully affect demand and  
9   competitiveness in the console markets.

10   **Q.**   So COD is important and some other games are important,  
11   but you don't name any of those and consider those in your  
12   analyses; correct?

13   **A.**   I consider the impact of many games. Like, for example,  
14   in one of my quantitative analysis -- analyses, I compute what  
15   the predicted change in console shares would be from taking a  
16   variety of titles exclusive and then compute what the impact on  
17   shares would be.

18   **Q.**   But those are Activision titles. You didn't consider  
19   these other titles from other publishers?

20   **A.**   In my initial report I present a table of the  
21   implementation fact of non-Activision titles on Generation 8  
22   console shares, so I do consider non-Activision titles in my  
23   analysis.

24   **Q.**   And how did you input them into your analysis?

25   **A.**   So in my analysis, one of my economic opinions is that

1 exclusive differentiated content can meaningfully affect  
2 demand, and that analysis where I made non-Activision content  
3 exclusive helped to support that economic opinion.

4 **Q.** But you -- did you -- I'm trying to make this simple, and  
5 maybe I'm misunderstanding.

6 So did you put in games like Madden or FIFA that are not  
7 exclusive, they are multiplatform games?

8 **A.** So I apologize if I'm unclear.

9 In my share model, one of the predictions is taking games  
10 that were multiplatform and simulating what the impact would  
11 have been had they been taken exclusive, and for that analysis  
12 I also looked at games that were provided by non-Activision  
13 publishers.

14 **Q.** So you're saying if we go to your choice model in your  
15 report, we can find out what the impact would be if FIFA was  
16 taken exclusive? You can't find that, can you, in your report?

17 **A.** In my initial report I can find a table of certain  
18 non-Activision games and the impact of those. I don't recall  
19 if FIFA precisely is contained in that table.

20 **Q.** Did you consider Madden?

21 **A.** I don't recall if I -- if you let me look at my initial  
22 report a second.

23 **Q.** Go right ahead.

24 **A.** Okay. Thank you.

25 **Q.** Please. Just tell us the page that you're referring to,

1 please.

2 **A.** (Witness examines document.) Figure 37.

3 **Q.** Which is on what page?

4 **A.** PX5000-159. It is page 152 of my initial report,  
5 Figure 37.

6 And it appears that in this table Madden is included and  
7 is a predicted share change from taking Madden exclusive.

8 **Q.** Now, you put that in your choice model, right, which we'll  
9 get to in a moment? Right?

10 **A.** There are different quantitative models in my report. I'm  
11 referring here to what I refer to as the share model.

12 **Q.** Isn't that the choice model?

13 **A.** So all of my quantitative analyses there's some element of  
14 choice. It models consumer choice. Like share model is a  
15 discrete model. The share model is based on a discrete choice  
16 model. My vertical foreclosure model models consumer choice.

17 I just need more specific language to better understand  
18 which model you're referring to.

19 **Q.** The model you're referring to in Figure 37 is what you  
20 have also called the choice model as well as the share model or  
21 are you saying those are two different models?

22 **A.** I apologize. I don't recall the language. It may have  
23 been referred to as a demand model, but this is the demand  
24 model or share model.

25 **Q.** So that was your initial model, which we'll get to, where

1 you produced a number that 8.9 percent of PlayStation COD  
2 players would move to Xbox; right?

3 **A.** That is not the characterization of that number. I think  
4 you're referring to this model predicting that on average,  
5 across Call of Duty titles during Generation 8, if it were made  
6 exclusive to Xbox, Xbox share would increase on average by 8.9  
7 percentage points.

8 **Q.** So can we just make clear so we are all referring to the  
9 same models, you call that model the demand model?

10 **A.** The share model, yes. Once --

11 **Q.** You want to call it the share model? It doesn't matter.  
12 Whatever you want to call it just so we have it in the record  
13 and refer to it the same way.

14 **A.** Thank you. Let's call it the share model, please.

15 **Q.** So that's the share model.

16 **THE COURT:** But that market is Xbox -- of  
17 high-performance console market, its share would increase?

18 **THE WITNESS:** Yes. So the share model is the relative  
19 share between just Xbox and PlayStation consoles.

20 **THE COURT:** So that means migrating from PlayStation  
21 to Xbox?

22 **THE WITNESS:** Correct.

23 **THE COURT:** You said Microsoft share would increase by  
24 8.9 percent, but that would have to come from PlayStation?

25 **THE WITNESS:** In this model, yes, it would come from

1 that. And it's -- just to be clear -- I apologize, it's  
2 confusing -- it's Generation 8 --

3 **THE COURT:** Yes.

4 **THE WITNESS:** -- so it's looking at PlayStation 4 and  
5 Xbox 1.

6 **BY MS. WILKINSON:**

7 **Q.** Okay. And you have another model called the foreclosure  
8 model; right?

9 **A.** A vertical foreclosure or foreclosure model is fine.

10 **Q.** This is a vertical merger case; right?

11 **A.** Yes.

12 **Q.** And on Figure 37, these are -- you use your share model to  
13 predict what will happen to these games or what would happen if  
14 these games were taken exclusive?

15 **A.** It predicts what happens to console shares if these games  
16 were taken.

17 **Q.** If these games are taken exclusive?

18 **A.** Correct.

19 **Q.** Okay. And how did you pick these games?

20 **A.** So Figure 36 is looking at Activision titles. Figure 37  
21 we're looking at the top ten non-Activision titles released  
22 during this period I believe based on unit sales.

23 **Q.** Okay. So let's go back to what kind of analysis you've  
24 done using your models and what you haven't.

25 You have modeled console share shift if Call of Duty is



1 taken exclusive to Xbox; right?

2 A. Yes, for Generation 8.

3 Q. Yes. And that's one of the markets you've defined; right?  
4 Console market?

5 A. I defined two console markets, but this is -- you know,  
6 Xbox and PlayStation are in both.

7 Q. But you just explained to Her Honor that the one you used  
8 here was just Xbox and PlayStation 5; right?

9 A. So --

10 Q. Just --

11 A. I'm sorry.

12 Q. Professor Lee --

13 A. This is PlayStation 4 and Xbox 1, and they're not in the  
14 high-performance console market today because today it's  
15 PlayStation 5 and Xbox series.

16 Q. So that's my point. You used different games, different  
17 data from different models, to predict what would happen with  
18 these models.

19 I shouldn't say "models." With these -- this generation  
20 of Xbox and PlayStation; right?

21 A. That's right. It's using Generation 8 data.

22 Q. And not data from Xbox S and X; correct?

23 A. Yes, that is correct.

24 Q. But then you apply it to today's market to predict what  
25 will happen for PS5 and Xbox S and X?

1   **A.**   I don't agree with that characterization. I use this as  
2   one of many pieces of evidence that support my later analysis  
3   when I analyze Generation 9 foreclosure.

4   **Q.**   In the model, that's what you do, you take the data from  
5   the older versions of PlayStation Xbox; right?

6   **A.**   If you can finish the question --

7   **Q.**   That's the model, that's the data you use. And when you  
8   apply the share shift that comes out of that model, you apply  
9   it to the current generation?

10   **A.**   So it's the language "apply" that I don't agree with.  
11   This is one piece of evidence that I use as supporting evidence  
12   for my -- an input later on in my proportion model. I don't  
13   apply it in that way.

14   **Q.**   Okay. So you did that for consoles.

15        You have another market called content library services;  
16   right?

17   **A.**   Yes.

18   **Q.**   And that is the subscription services we've been talking  
19   about for content libraries or a catalog of different games;  
20   right?

21   **A.**   Yes.

22   **Q.**   And you define that as a market and say that that market  
23   will be harmed if Call of Duty is taken exclusive; right?  
24   That -- that competitive market will be harmed if it's taken  
25   exclusive?

1   **A.**   My economic opinion is that likely foreclosure of  
2   Activision content -- not restricted to Call of Duty, so all  
3   Activision content, both current and back catalog -- it's that  
4   foreclosure, the greater likelihood of foreclosure, that would  
5   likely lead to competitive and consumer harm.

6   **Q.**   Dr. Lee, you did a quantitative analysis of how it would  
7   affect the console market; right? I can go look up the numbers  
8   of how you say it affects the console market.

9   **A.**   Could you repeat your question, please?

10   **Q.**   If I look up in your report your models and your models  
11   predict what the change in the console market will be if Call  
12   of Duty is taken exclusive by Xbox, what Her Honor just asked  
13   you about, those two shares, you say they're going to shift if  
14   Xbox is taken exclusive; right?

15   **A.**   I have a quantitative model for Generation 8 that predicts  
16   how shares would change if Call of Duty and other titles were  
17   taken exclusive.

18   **Q.**   And you actually produce a percentage share shift from  
19   that model; right?

20   **A.**   Correct.

21   **Q.**   Okay. So in the content library services area, you don't  
22   have a model that predicts the quantitative share shift that  
23   would occur; right?

24   **A.**   I do not have a quantitative model for that market.

25   **Q.**   And for the cloud gaming services market that you define,

1 you also don't have a quantitative model that predicts the  
2 share shift if Call of Duty is taken exclusive by Xbox?

3 **A.** I do not have a quantitative model for the cloud market.

4 **Q.** Okay. Now, let's -- that's for what we would call  
5 complete foreclosure; right?

6 **A.** Taking a title fully exclusive is what could be referred  
7 to as complete or full foreclosure.

8 **Q.** That's what your quantitative model was based on. For the  
9 console market it was based on the Call of Duty being taken  
10 totally away from PlayStation 5; right?

11 **A.** So this part of my analysis --

12 **Q.** That's all we're asking about.

13 **A.** But you had said my quantitative analysis, and there are  
14 other quantitative models in my report. I just wanted to  
15 clarify we're talking about the first one, the share model.

16 **Q.** Yes, and then we'll get to the foreclosure model.

17 But the share model -- right? -- this is based on complete  
18 foreclosure. In other words, PlayStation cannot get any of the  
19 Call of Duty games; right?

20 **A.** This is done in a one-by-one title basis. So, yes, for a  
21 given title, it is taken fully away from PlayStation.

22 **Q.** Professor Lee, there's a difference between full or  
23 complete foreclosure and partial foreclosure; right?

24 **A.** Yes.

25 **Q.** And you modeled using your economic quantitative model

1 full or complete foreclosure; right?

2 **A.** Full foreclosure on a title basis.

3 **Q.** Okay. And for partial foreclosure, you did not do an  
4 economic modeling quantitative analysis of what would happen if  
5 there was partial foreclosure; right?

6 **A.** I did not predict the share change arising from a partial  
7 foreclosure strategy.

8 **Q.** Exactly.

9 So if Her Honor wanted to go to your testimony or your  
10 report and find what the share shift would be if there was  
11 timed exclusivity, for example, which is partial foreclosure,  
12 she couldn't find that in your testimony or your report; right?

13 **A.** There may be other qualitative evidence that speaks to it.

14 **THE COURT:** She was asking about quantitative.

15 **THE WITNESS:** Quantitative. So the first model, the  
16 share model, does not do that.

17 **BY MS. WILKINSON:**

18 **Q.** It also does not model content exclusivity, does it?

19 **A.** Maybe I'm confused. You said content exclusivity?

20 **Q.** Partial exclusivity --

21 **A.** Ah.

22 **Q.** -- where you get certain content but not others, it  
23 doesn't model that, does it?

24 **A.** The share model does not model that.

25 **Q.** And it doesn't model what might be considered partial

1 foreclosure and described as degraded content; right?

2 **A.** It does not model that.

3 **Q.** And it doesn't produce a share shift for any of those  
4 types of partial foreclosure; right?

5 **A.** The share model does not produce...

6 **Q.** All right. Now let's go to your vertical foreclosure  
7 model. Okay?

8 And your vertical foreclosure model does give a share  
9 shift in the console market if there's full foreclosure, right,  
10 of Call of Duty?

11 **A.** So the vertical foreclosure model uses as an input  
12 something known as a conversion rate, and that input  
13 corresponds to an amount of share. It doesn't produce that  
14 number. It's an input.

15 **Q.** Well, you put the input of the 20 percent conversion.  
16 That's different. That's like who will switch; right? You're  
17 saying 20 percent will switch. That's what you put into your  
18 market; right?

19 **A.** So the 20 percent is a set of users who switch. I don't  
20 need to give you a precise definition, but that is an input,  
21 that's correct.

22 **Q.** Right? It's not produced by the model after you run it.  
23 The 20 percent conversion is an input?

24 **A.** Correct.

25 **Q.** And after you run your model based on that and other

1 inputs, you predict that there will be a 5.5 percent share  
2 shift between PlayStation 5 and Xbox X and S if Call of Duty is  
3 fully withheld; right?

4 **A.** I just want to be very precise. The vertical foreclosure  
5 model says for a 20 percent conversion, there is 5.5 percent  
6 more Xboxes sold as a function of 2022 Gen 9 sales. It's not  
7 necessarily a share -- it's --

8 **Q.** It's not a share shift?

9 **A.** No. It's a share of Gen '22 -- 2022 Gen 9 sales.

10 **Q.** That's a share shift; right?

11 **A.** The vertical foreclosure model, there is some small  
12 details, but for the purposes of right now, it is a share  
13 shift.

14 **Q.** Let's write this down so there's no doubt about what  
15 you're saying.

16 (Pause in proceedings.)

17 **BY MS. WILKINSON:**

18 **Q.** Let's make it simple. My handwriting stinks so tell me if  
19 you can't read it.

20 For now we're just going to talk about these two models so  
21 we can understand what comes out of them.

22 The first one, the first model we were discussing, you're  
23 calling it?

24 **A.** A share model.

25 **Q.** A share model.

1           Okay. And over here we're going to call it the  
2       foreclosure model; right?

3       **A.**    Yes.

4       **Q.**    So we're going to talk about consoles, what you define as  
5       the console market.

6           And one of the things that comes out of your share model  
7       is a share shift that you predict in the console market defined  
8       as a PlayStation console and Xbox consoles; right?

9       **A.**    A Generation 8 share shift.

10      **Q.**    And what is that share shift?

11      **A.**    For Call of Duty titles on average?

12      **Q.**    Yes.

13      **A.**    It's 8.9 percentage points.

14      **Q.**    Okay. Now, so we make this easier for everyone to follow,  
15       especially me, we're only going to talk about share shift of  
16       Call of Duty based on Call of Duty right now. Okay?

17      **A.**    Yes.

18      **Q.**    You have to caveat that. Do you understand that's what  
19       I'm asking you about?

20      **A.**    I understand.

21      **Q.**    Okay. So we'll put "COD" up here so there's no  
22       misunderstanding.

23           In your foreclosure model, you predict a different  
24       percentage share shift; right?

25      **A.**    I have different inputs, but for one input it's a



1 20 percent conversion rate. It implies a 5.5 percentage point  
2 shift.

3 Q. Dr. Lee, I just asked you about the output not what the  
4 inputs were.

5 It predicts a 5.5 percent share shift; correct?

6 A. For a given input, it outputs a 5.5 percentage point share  
7 shift.

8 Q. So the inputs in this foreclosure model are not the same  
9 as in the share model; right?

10 A. It's a different model using different inputs.

11 Q. All right. Okay.

12 And for both of these, you use data from the older  
13 consoles that you were talking about?

14 A. That is not correct.

15 Q. So you actually use different data for each model; right?

16 A. That's correct.

17 Q. You use global versus U.S. depending on which model you're  
18 using; right?

19 A. The vertical foreclosure model is forward looking.

20 Q. And so you're using global data?

21 A. And foreclosure here is modeled as taking a title  
22 exclusive globally.

23 Q. Okay. So you're using global data and over in the share  
24 model you're using U.S. data; right?

25 A. Correct.

1 Q. And are these data from the same data source?

2 A. They are different data sources.

3 Q. So different datasets?

4 A. Different data.

5 Q. I'm just going to call it Set 1 and Set 2.

6 So you're not making a direct comparison between these two  
7 market shifts; right?

8 A. I'm noting the 5.5 percent is lower than the 8.9 in my  
9 analysis.

10 Q. But it's based on different data; right?

11 A. Yes.

12 Q. Different inputs?

13 A. Yes.

14 Q. Okay. And now if we go back to the question about content  
15 library services, asking the same questions, there is no way  
16 from the share model to get a percentage share shift out of  
17 this; right?

18 A. The share model does not predict --

19 Q. Okay. And --

20 A. -- the content library.

21 Q. Nor does the foreclosure model; right?

22 A. No. Those models are for the console markets.

23 Q. Okay. But you don't have any models for the content  
24 library. That's all we're trying to establish.

25 A. I don't have a quantitative model predicting those

1 outputs.

2 Q. Right. And for cloud gaming, you get the same answers.  
3 There's no share shift or model that produces a share shift  
4 estimate for the cloud gaming services market you define?

5 A. That is correct.

6 Q. And there's -- nor is there one from the -- it doesn't --  
7 excuse me. Let me start again.

8 Your foreclosure model doesn't provide a quantitative  
9 share shift estimate in the cloud market; right?

10 A. Correct.

11 Q. And we went over, but I just want to make sure, if we go  
12 this is full we said; and if we do partial foreclosure of COD  
13 and we start with consoles, there's no share shift percentage  
14 coming out of any of your models; right?

15 A. No.

16 Q. So that's no for consoles, for both models; right?  
17 Foreclosure and your share model?

18 A. Both of them focus on total exclusivity or full  
19 exclusivity.

20 Q. And that would be true for your content library and cloud  
21 market -- markets as well; right?

22 A. Yes.

23 Q. So let's talk about your model that does predict these two  
24 models that give a different prediction of the share shift.

25 Okay?

1           You told us that the share model uses U.S. data; right?

2     **A.**    Yes.

3     **Q.**    Okay. And the other uses global.

4           What else is different about the share model from the  
5   foreclosure model that results in these different predictions?

6           I'll just ask you the simple question: Why don't they  
7   come out the same?

8     **A.**    So my vertical foreclosure model I note that I'm using a  
9   conservative input relative to the 8.9 percent. If I use the  
10   higher conversion rate in a vertical foreclosure model, it  
11   would predict a higher share shift and a greater likelihood of  
12   foreclosure. I use other evidence to support the inputs of my  
13   vertical foreclosure model.

14    **Q.**    We'll get to the support. We're just trying to figure out  
15   what's different about the models.

16    **A.**    So --

17    **Q.**    So here in the foreclosure model, one input that's  
18   different is the conversion rate; right?

19    **A.**    The share model doesn't have a conversion rate. So  
20   they're just different models. But my vertical foreclosure  
21   model I said again uses a conversion rate that implies a lower  
22   share shift than what I predicted with the share model.

23    **Q.**    The share side you don't even have a conversion rate;  
24   right?

25    **A.**    It's a different model.

1 Q. Right.

2 Here in your foreclosure model you have an input for  
3 conversion, which means those gamers that will move off  
4 PlayStation and go buy an Xbox if there's total foreclosure?

5 A. The conversion is a subset of users on PlayStation who  
6 would buy a new Xbox, that's a correct.

7 Q. And you put in the model 20 percent of people who play  
8 Call of Duty on PlayStation would go buy an Xbox; right?

9 A. It's 20 percent of a subset of users on PlayStation. It's  
10 the users who would have played Call of Duty on PlayStation and  
11 of those users who don't already own an Xbox; right? The folks  
12 who could possibly buy an Xbox and also they don't play on a PC  
13 Call of Duty. So with that subset of users I'm assuming  
14 20 percent of them would purchase a new Xbox box.

15 Q. Okay. So we're going to -- we're -- you're getting ahead  
16 of what that is 20 percent of, but put an input based on  
17 however you measured that group, whoever that group is, of  
18 20 percent of those folks would convert; right?

19 A. That is an input for one specification, that is right.

20 Q. That is not a quantitative assessment produced from either  
21 of your models; right?

22 A. So I provide support for the various inputs using --

23 Q. Professor Lee --

24 A. -- quantitative evidence, yeah.

25 Q. -- I didn't ask you for the other support. We'll get to

1 that.

2 I just asked you whether your -- either of your models  
3 produces this conversion rate of 20 percent after you run it.

4 A. The 20 percent is input so it's not produced.

5 Q. So you put that into the model, that number, and you put  
6 that in and you say you have justification for why you made it  
7 20 percent; right?

8 A. I provide support for that input.

9 Q. Okay. And then let's erase these underneath here and  
10 start with the -- who you were measuring in each of these  
11 models. Okay?

12 Go to where you were talking about first foreclosure  
13 model. This is 20 percent of what world?

14 A. So we're focusing first the universe of PlayStation users  
15 and then --

16 Q. That's the hundred percent? Is that who you measured?

17 A. I'm sorry. Are you asking me the population that  
18 conversion rate applies to?

19 Q. Yes.

20 A. Yes. So I'm starting with a set of all PlayStation  
21 users --

22 Q. All? I'm sorry?

23 A. -- all PlayStation users, and then --

24 Q. That play Call of Duty or don't?

25 THE COURT: He's getting there. He's getting there.

1           **THE WITNESS:** So all PlayStation users, and then we'll  
2 look at the folks who are predicted to play or purchase Call of  
3 Duty on PlayStation. Let's call those users affected users.  
4 Those are the ones who would be affected by the vertical  
5 foreclosure.

6 **BY MS. WILKINSON:**

7 **Q.** So that's a smaller circle; right?

8 **A.** It's a subset, that's correct.

9 **Q.** And these are -- are these people who play COD?

10 **A.** They're the ones who purchase it and presumably play it.

11 **Q.** Would you purchase it if you didn't play it?

12 **A.** I would personally not.

13 **Q.** Okay. So these are people who play COD; right?

14 **A.** For the purposes of this, yes, the Call of Duty players  
15 who would be playing the feature.

16 **Q.** Okay.

17 **A.** And now of these folk --

18 **Q.** Yes.

19 **A.** -- there's a fraction that don't own an Xbox.

20 **Q.** And that's only in this smaller circle, not in the bigger  
21 circle? There's a -- you're already looking at the people who  
22 play or would go buy Xbox to get COD, and you're saying that  
23 some of those people already own an Xbox; right?

24 **A.** Correct.

25 **Q.** Okay. So that's a little bit smaller world; right? These

1 people own an Xbox so you're not going to count them?

2 **A.** That's correct.

3 **Q.** Okay. Now who are we left with?

4 **A.** And then some subset of them may actually -- they don't  
5 own Xbox but they own a PC, and some of those folk may decide:  
6 You know, Call of Duty is foreclosed. I'm going to play on my  
7 PC instead. And we're going to set those folk aside.

8 **Q.** Okay. And in this -- before you get to that smaller set,  
9 in this set of people you didn't consider because they either  
10 own an Xbox or a PC and you don't think they would convert;  
11 right? That's the --

12 **A.** The ones who purchased a PC, right.

13 **Q.** PC; right?

14 **A.** Right. Right.

15 **Q.** You don't include anyone who might go buy a Nintendo in  
16 the future to play COD; right?

17 **A.** So, yeah, this is focusing on COD as being available on  
18 PlayStation Xbox using projections from Microsoft's deal model  
19 for future sales of Call of Duty on the two platforms.

20 **Q.** That wasn't my question. My question was: When you  
21 consider who to measure, you didn't consider people who might  
22 go buy a Nintendo in the future when Call of Duty is available  
23 on it; right?

24 **A.** So in the vertical foreclosure model, I don't -- I have  
25 sales projections for COD and Switch and those -- that



1 possibility is not contained.

2 Q. Okay.

3 All right. So we're down in this world of people who play  
4 COD to own an Xbox or a PC that they would already use for COD,  
5 and is that the world you were measuring?

6 A. So that is the population of potential Xbox purchasers in  
7 my model.

8 Q. Okay. So that's what we call the potential Xbox  
9 purchasers. And that means in the future world that you're  
10 measuring in theory, Call of Duty is not accessible on a  
11 PlayStation; right?

12 A. Yes.

13 Q. And you're predicting that a certain percentage of these  
14 people will go buy an Xbox because they want to play Call of  
15 Duty?

16 A. Yes.

17 Q. Okay. So 20 percent is of which world?

18 A. Potential Xbox purchasers.

19 Q. So of this world? Not of all PlayStation folks. So it's  
20 20 percent of this world; right?

21 A. Yes.

22 Q. Now, you've looked at other studies, surveys, models and  
23 they measure it differently; right?

24 A. Different pieces of evidence have different measures.

25 Q. Okay. So over here in your share model, can you describe

1 for us what world you're measuring? When you say 8.9 percent  
2 of people who switch, 8.9 percent of what? For who?

3 **A.** It's 8.9 percent of overall Gen 8 console sales.

4 **Q.** So this world is you looked at all of the sales of Gen 9  
5 consoles, which would only -- which would mean PlayStation 5  
6 and Xbox X and S?

7 **A.** The share model again is Gen 8. The share model is Gen 8.

8 **Q.** Right. So this is not all sales of Gen 9?

9 **A.** It is all sales of Gen 8 of PlayStation 4 and Xbox 1.

10 **Q.** Okay. So this world that you used for share is a very  
11 different world than the world you measured for your  
12 foreclosure model; right?

13 **A.** It's different data as we discussed.

14 **Q.** Yeah. And this is that U.S. data for Gen X and Xbox 1;  
15 right?

16 **A.** Correct.

17 **Q.** Did you look at all that or is there a smaller world that  
18 you measured before you got to the 8.9 percent?

19 **A.** So the data in the share model is all Gen 8 sales --

20 **Q.** So this --

21 **A.** -- in the U.S.

22 **Q.** Sorry. You go ahead. Finish.

23 **A.** All Gen 8 sales in the U.S.

24 **Q.** Okay. So this is U.S. only.

25 Okay. And this is, out all of those folks, 8.9 percent

1 you're predicting with this model would buy an Xbox; right?

2 **A.** To shift, yes, in the shares.

3 **Q.** So this is not -- the share model is not -- when you  
4 compare the share to the foreclosure, those are not apples to  
5 apples; right?

6 **A.** So the 20 percent of potential Xbox purchasers if they  
7 bought a new Xbox in the vertical foreclosure model would imply  
8 a share shift of overall console sales. So that's the 5.5  
9 percentage points.

10 **Q.** Right. But that wasn't my question.

11 **A.** I apologize.

12 **Q.** You are not -- you've heard the phrase "comparing apples  
13 to apples or apples to oranges"?

14 **A.** I have heard that phrase.

15 **Q.** Yeah. And apples to apples means they're basically the  
16 same based on the same, here, datasets so you can compare to  
17 see whether you're producing a similar result. That's not what  
18 you did here; right?

19 **A.** Comparisons inevitably have differences, and I think  
20 that's why it's important to look at many different sources.  
21 And I agree with you that for reasons that you correctly  
22 pointed out, there are differences that go into the two  
23 different models.

24 **Q.** And just to make this clear, over in the foreclosure model  
25 it's global data, right, which is not what you did in share?

1 Right?

2 A. It is global projected sales.

3 Q. And is it Gen 8 and Xbox 1 data?

4 A. It is future sales of content which includes Gen 9  
5 consoles.

6 Q. So this includes Gen 9, the foreclosure model, but the  
7 share model doesn't?

8 A. Correct.

9 Q. Now, you say that -- we can go back to the share model,  
10 but let's focus on the foreclosure model because you're saying  
11 you think that's more conservative because it's a smaller  
12 number; right?

13 A. Yes.

14 Q. It's -- it's -- I don't know, you do the math for me  
15 because you're the math guy -- but it's a little -- the share  
16 model is a little less than half as large or double as the 5.5?  
17 How would you describe it?

18 A. 5.5 is less than 8.9.

19 Q. Okay.

20 THE COURT: 3.4 percent.

21 MS. WILKINSON: Pardon?

22 THE COURT: 3.4.

23 BY MS. WILKINSON:

24 Q. Do you agree with that?

25 A. I agree with Your Honor.

(Laughter)

**THE COURT:** Okay. I can do basic math.

**BY MS. WILKINSON:**

**Q.** That's a good move on your part.

Okay. So let's talk about, you say: Okay. This produces 5.5 percent and it's true that I picked this 20 percent, but I've looked at other things that make me believe this is a correct prediction. Right?

**A.** I think that's -- that's important to emphasize in my vertical foreclosure model I use a range of conversion rates because I agree that precision is difficult for numbers that might be uncertain, and so I looked across a range of conversion rates and implied share shifts to inform my economic opinions.

**Q.** When you -- we'll get there, but when you change these levers, the 20 percent and another lever you have -- which is the LTV, the value of the console over the life of the console?

**A.** That is another input, correct.

**Q.** When you change those, you get a different share shift; right?

**A.** The LTV does not affect the share shift.

**Q.** You get a different value for what it is worth? In other words, what you would recoupe versus what you lost; right?

**A.** The LTV affects whether the vertical foreclosure model predicts foreclosure would be -- the benefits would exceed the

1 costs, that's right. It's --

2 **Q.** And, again, to try to keep it simple, you were trying to  
3 figure out if it was worth it economically in this model or at  
4 what point it would be worth it for Xbox to withhold Call of  
5 Duty; right?

6 **A.** The vertical foreclosure model with only the benefits and  
7 costs that it contains looks at whether the benefits from  
8 taking a title exclusive would exceed the cost; and that's  
9 right, that's an output of the --

10 **Q.** So if we were at a hundred percent, that means you would  
11 lose those revenues on -- from PlayStation, Xbox would, because  
12 it's pulling it from PlayStation; right? But it would -- by  
13 putting it on Xbox, it would gain the same amount so it would  
14 be neutral basically; is that right?

15 **A.** That's right. The hundred percent says the benefits  
16 within the model are equal to the costs; and if it's above a  
17 hundred percent, then the model using only those benefits would  
18 predict they would exceed the costs.

19 **Q.** Right. So if it's 113 percent, which is what you say it  
20 can be and will produce this 5-point, that is a positive,  
21 meaning they would make more money by withholding it than they  
22 would by providing it to PlayStation; right?

23 **A.** Within the model and the benefits contained, that's the  
24 model's prediction.

25 **Q.** Okay. And I don't know that we can say the numbers

1 publicly, but there's a known number that everybody agrees on  
2 of the sales that you're using that would be on PlayStation;  
3 right?

4 You -- everybody agrees. There's -- you are looking at a  
5 number of sales that you predict and that Xbox predicts it  
6 would get from selling it on PlayStation; right?

7 **A.** I'm using Microsoft projections for future sales.

8 **Q.** Right. And that is for -- that is also for only  
9 withholding the 2025 version, is that right, of PlayStation --  
10 I mean of COD?

11 **A.** I have two analyses with COD. One with just 2025 and also  
12 one that looks at removing four years in a row of COD. So '25,  
13 '26, '27, '28. So that's another variant, but we can for now  
14 just talk on the '25 one.

15 **Q.** So this one you're saying if you -- if they did not give  
16 PlayStation COD 2025, they would lose a certain amount of money  
17 because they would forego those sales on PlayStation; right?  
18 They would lose revenues?

19 **A.** That is one of the costs, that's right.

20 **Q.** And you have a number in your report what that number is;  
21 right?

22 **A.** In terms of lost revenues on PlayStation sales, lost  
23 profits on PlayStation sales.

24 **Q.** I'm just going to call it X lost revenue. Okay? We don't  
25 need to say the number.

1 And then you have a number that's Y, which are the  
2 increased revenues or the revenues it would get if it sold it  
3 only on Xbox; right?

4 A. I may have misspoken. It's supposed to be profits. But,  
5 yes, increased profits --

6 Q. Okay.

7 A. -- from sales on Xbox, from increased console sales, and  
8 from increased, you know, other things that Microsoft earns  
9 when consumers come over to the Xbox platform.

10 Q. Right. But it's -- we'll call those the profits they make  
11 from putting it only on Xbox; right?

12 A. Yes.

13 Q. From Call of Duty and the other things you think.

14 So over here on the losses, it's not lost revenue, it's  
15 loss profits; right?

16 A. Yes.

17 Q. So there you're comparing apples to apples; right?

18 A. I'm comparing profits -- lost profits to recoupe profits.

19 Q. That's apples to apples. Those are compared to -- profits  
20 you would make on one platform versus profits you would make on  
21 another?

22 A. Yes.

23 Q. Okay. And you're -- you predict that that would be  
24 113 percent; is that right? In other words, it would be more  
25 positive to withhold it because you would net out more profits



1 than if you kept it -- excuse me. If I'm walking away, please  
2 tell me -- than if you kept it on PlayStation; right?

3 **A.** So for one set of many inputs, I tried; but for one  
4 particular set of inputs, that number is 113 percent.

5 **Q.** Let's -- so we can show all the changes, why don't you  
6 tell Her Honor where you have that chart which shows what  
7 happens when you change some of those inputs.

8 **A.** Sure. Your Honor, it is on PX5001-076 or page 72 of that  
9 document.

10 **Q.** Is that your rebuttal report?

11 **A.** It is my reply report and it is Figure 11. Again,  
12 PX5001-076.

13 (Pause in proceedings.)

14 **BY MS. WILKINSON:**

15 **Q.** I don't think we can show this -- right? -- so we're going  
16 to refer to it carefully because Her Honor sees this version,  
17 the public doesn't.

18 So I'm going to count rows and things like that if you  
19 don't mind. Okay?

20 **A.** Understood.

21 **Q.** All right. So what this shows is two of the inputs that  
22 you put into your foreclosure model, one is the LTV adjustment  
23 factor; right?

24 **A.** Yes.

25 **Q.** And the other is the Xbox conversion rate; right?

1     **A.**    Yes.

2     **Q.**    Okay.  The LTV adjustment factor, you're saying that when  
3   Xbox withholds PlayStation, they don't just get the exact same  
4   revenues, they get more because Call of Duty people spend more  
5   over the lifetime of the console, right, compared to non-COD  
6   players?

7     **A.**    If it helps Your Honor to provide a bit more context what  
8   the LTV means or references, so the LTV or lifetime value is  
9   what Microsoft projects a new Xbox user is worth, and there's  
10  an average LTV across all new Xbox users.

11           And what this adjustment factor accounts for is that  
12  somebody who comes over to Xbox to play a particular piece of  
13  content, like Call of Duty, might actually be worth more to  
14  Microsoft because that user would likely spend more.

15           And so 40 percent says --

16           **THE COURT:**  Spend more than someone who came over for  
17  different titles?

18           **THE WITNESS:**  Just an average -- just an average Xbox  
19  user.

20           So compared to the overall set of new Xbox users, people  
21  come over to play Call of Duty.  Here, it indicates they would  
22  spend -- it would be worth 40 percent more to Microsoft over  
23  this five-year period.

24     **BY MS. WILKINSON:**

25     **Q.**    Okay.  And if we turn back to 71, just so Her Honor can

1 see the numbers, in the last paragraph, 2018, this describes  
2 what we've been describing; that what happens when you withhold  
3 the 2025 release of Call of Duty. And it shows the loss of  
4 profits from withholding it from PlayStation but what they  
5 would recoupe on Xbox; right?

6 **A.** Can you point me again to where you're looking at?

7 **Q.** Paragraph 218 on page 71. Just a page before where you  
8 are.

9 Right? That -- that was a scenario that you used  
10 originally in your first report; right?

11 **A.** So there's a revised LTV, but that is the scenario that I  
12 evaluated.

13 **Q.** And after Professor Carlton submitted his report, you  
14 revised the LTV; right?

15 **A.** So this LTV came from data I did not have access to so I  
16 updated it with the most recent data that was provided.

17 **Q.** And when you predict this loss of profits, you're doing it  
18 over five years; right?

19 **A.** This is looking forward over five years of lost sales.

20 **Q.** But it's withholding only one year of Call of Duty; right?

21 **A.** This one is withholding one year of Call of Duty.

22 **Q.** Right. So now let's look at paragraph 219 with your  
23 Figure 11.

24 And there, you're responding to criticisms from  
25 Professor Carlton and you're trying to say, "Well, look what

1 happens. Even when you change my inputs, here are the  
2 results"; right?

3 A. Figure 19 sets up -- paragraph 219 -- sorry -- sets up  
4 Figure 11, which presents a range of predictions for different  
5 inputs.

6 Q. You didn't have Figure 11 in your original report, did you  
7 or do you remember?

8 A. I believe I had --

9 Q. You did.

10 A. -- a sensitivity analysis like this in my original report  
11 for all three proposed scenarios I analyzed.

12 Q. Let's look at this one.

13 And you show -- let's start with the one that we were --  
14 that was on the prior page. So that is a certain percentage  
15 LTV adjustment factor; right? You see the third one down?

16 A. I do see that.

17 Q. And when you go over for 15 percent, it is not a net  
18 positive to withhold Call of Duty 2025 from PlayStation; right?

19 A. As I note, this model is missing many other benefits, but  
20 within the model --

21 Q. That's all we're asking.

22 A. -- it's 97 percent.

23 Q. So it's not a hundred percent. We're trying not to reveal  
24 all the numbers, but --

25 A. Sorry.

1 Q. -- that's all right. You made my point. It's not a  
2 hundred percent; right?

3 A. This table is below. The number is below.

4 Q. So if you're wrong about your conversion rate and it  
5 should be 15 percent and not 20 for number three for your --  
6 even including the LTV adjustment you make, it doesn't give  
7 Xbox a net positive or incentive or reason to -- based on the  
8 numbers, to withhold Call of Duty from PlayStation; right?

9 A. I wouldn't draw that conclusion. I would say that within  
10 the model, that is what is predicted.

11 Q. That's what we're talking about as we go forward. We're  
12 just talking about the model. Not other things you looked at  
13 right now. Okay?

14 Your model produces a percentage that's less than a  
15 hundred percent, and you told us a hundred percent is where  
16 it's even; right?

17 A. Within the model, that's correct.

18 Q. Okay. Now, within model, if you change the LTV adjustment  
19 factor, right, you also get different percentages? Right?

20 A. That is correct.

21 Q. The lower it is, the lower the recoupment or conversion  
22 rate and the higher you make the LTV, the higher the conversion  
23 rate -- I mean, the recoupment rate or percentage; right?

24 A. Correct.

25 Q. And the same is true, you only modeled down to the LTV --

1 for the Xbox conversion rate you only modeled down to  
2 15 percent; right?

3 **A.** I present --

4 **Q.** You only use 15 -- the lowest percentage you use is  
5 15 percent for a conversion rate?

6 **A.** I don't recall in my -- the backup material, but on this  
7 table the lowest number that is presented is 15 percent.

8 **Q.** Okay. So you have -- one, two, three, four -- five  
9 percentages here and you picked the one in the middle,  
10 20 percent, when you initially made the prediction -- I mean,  
11 you put that as the input into your model?

12 **A.** I have a 20 percent input and I present sensitivities  
13 around that input.

14 **Q.** Okay. So if someone thinks it's 15 percent and disagrees  
15 with you, since you picked that yourself, they're going to come  
16 up with a different recoupment rate even using your -- every --  
17 keeping everything else the same in your model?

18 **A.** That is correct. With different inputs, one gets  
19 different recoupment rates.

20 **Q.** Okay. So is it fair to say this 20 percent input is  
21 important because if you use a different number, you produce a  
22 different result in your model? I think that's pretty  
23 elementary, isn't it?

24 **A.** I think the characterization is important is what I'm  
25 saying. I agree that for a given input, you get different

1 outputs; but when forming my economic opinions, I'm looking at  
2 the output across a range of inputs. And also --

3 Q. We're just talking about the model right now.

4 A. That's correct. My use of the model looks across the  
5 range of inputs and understands the limitations of the model  
6 and benefits that are left out of the model to inform my  
7 opinions.

8 Q. If you change the conversion rate input, you get different  
9 outputs from your model?

10 A. Correct. And I -- and I -- I understand that and factor  
11 that into forming my economic opinions.

12 Q. Okay.

13 A. Sensitivity of results is a critical input into reasonable  
14 economic modeling.

15 Q. Great.

16 All right. Now let's talk about other information you  
17 looked at in addition to your modeling to determine whether  
18 this 5.5 percent share shift is reasonable; right?

19 A. Okay.

20 Q. You did that, didn't you?

21 A. Yes.

22 Q. You didn't just rely on the model?

23 A. I provided other evidence that supported the use of this  
24 input.

25 Q. And one of the things you site is Microsoft Xbox e-mail;

1 right?

2 A. Yes, I believe.

3 Q. They talk about --

4 A. Is there a particular --

5 Q. Sure. PX1136. Take a look at that.

6 A. (Witness examines document.)

7 Q. You're familiar with this document; right?

8 A. I am.

9 Q. And this is -- we can look at the e-mail. This is an  
10 e-mail that is forwarding an assessment of purchasing a  
11 different studio and different games and how that might affect  
12 whether to take those games exclusive; right?

13 A. That is my understanding.

14 Q. Okay. And then the document is dated 11-1-2019?

15 A. The latest e-mail on that chain is dated that.

16 Q. Great.

17 And it -- it -- it attaches a strategy approval for  
18 purchasing this studio; right?

19 A. Yes.

20 Q. Do you know if Xbox did purchase that studio?

21 A. It's my understanding they did not.

22 Q. So you look in this document, and let's look at 004, and  
23 you point to these numbers to say that they support your  
24 calculation of a 5.5 percent share shift; right?

25 A. I use this document to note it's consistent with both the



1 share model and the foreclosure model.

2 Q. I believe we can show this portion, which is number two,  
3 the role of content.

4 MS. WILKINSON: Roger, if you can show that -- publish  
5 that, please.

6 BY MS. WILKINSON:

7 Q. Okay. And this is the paragraph you're talking about;  
8 right?

9 A. Yes.

10 Q. And in this they are evaluating what would happen if they  
11 held content exclusive that they're buying instead of putting  
12 it on multiple platforms; right?

13 A. I believe this is -- are you talking about the highlighted  
14 passage?

15 Q. No. The whole paragraph. We'll get to the highlighted  
16 portion.

17 A. Yes, it's my --

18 Q. I'm trying to show what would change -- would it change  
19 growth in the console for them; right?

20 A. It's my understanding this is talking about how content,  
21 exclusive content, can affect console sales.

22 Q. And in parentheses it says (as read):

23 "Where an exclusive AA" -- or "AAA release accounts  
24 for a 2 to 4 percent console share shift in the U.S."

25 Right?

1     **A.**    Yes.

2     **Q.**    You weren't measuring in your foreclosure model U.S. data;  
3     right?  You were using global?

4     **A.**    It's looking at global sales.

5     **Q.**    So you're not suggesting the 2 to 4 percent is similar and  
6     comparable to your 5.5 percent, are you?

7     **A.**    The 2 to 4 is used to compare the share model against.  
8     It's the 1 to 3 to which you would use to compare against the  
9     foreclosure model.

10    **Q.**    Right.  So when you look at this document, the share shift  
11    that is estimated here is much lower than 5.5 percent; right?

12    **A.**    It is lower.

13    **Q.**    It's 1 to 3 percent; right?

14    **A.**    For -- it's my understanding this is for AAA titles in  
15    general.  I provide evidence that Call of Duty likely has a  
16    much larger share shift than a typical AAA title.

17    **Q.**    But you picked this and in your report said this supports  
18    that your 5.5 is a reasonable share shift estimate; right?

19    **A.**    I note that my share model notes that Call of Duty,  
20    because it sells so many more copies than other AAA titles, is  
21    likely to have a larger share shift than a typical AAA title.

22    **Q.**    And if you picked 2 percent to test between -- which is  
23    the middle, between 1 and 3 percent; right?

24    **A.**    2 is between 1 and 3.

25    **Q.**    Okay.  I'm glad we can agree on that.

1       -- and you modeled that out, the 2 percent, that would not  
2 make it financially feasible or reasonable to withhold Call of  
3 Duty from PlayStation; right?

4   **A.**   So in my vertical foreclosure model, I don't recall the  
5 exact numbers, but if the conversion rate fell and you got a  
6 2 percent shift and you held fixed all the other inputs, that  
7 likely will be the case in the model.

8   **Q.**   You know that because Professor Carlton pointed that out  
9 to you, right, in his report?

10   **A.**   I know -- I guess -- I'm inferring that because we  
11 discussed how a 15 percent conversion rate would be a little  
12 less than a hundred, and so an even lower conversion rate would  
13 also be below a hundred.

14   **Q.**   Did you yourself do the modeling using an -- only a  
15 2 percent or even a 3 percent shift worldwide?

16   **A.**   So I conducted my model using what I, through my  
17 evaluation of the evidence, believed to be reasonable share  
18 shifts for a title like Call of Duty.

19   **Q.**   But you didn't separately analyze it with a 2 or 3 percent  
20 market shift; right?

21   **A.**   It was not consistent with what I viewed in the documents  
22 in the share model. For example, the share model predicts in  
23 the U.S. share shifts of AAA titles that are actually around  
24 2 percent or even less. So it's within this range of 2 to 4,  
25 and the share model predicts the Call of Duty in the U.S. has a

1 much larger share shift.

2 And so those pieces of evidence together is what I  
3 discussed at length in my reports as supporting this value for  
4 my vertical foreclosure model.

5 Q. Okay. And did you look at page 5 of this same document?

6 A. I recall looking through this document.

7 Q. And I just want to make sure I have the right page.

8 (Pause in proceedings.)

9 BY MS. WILKINSON:

10 Q. Did you see that they -- the folks at Xbox did a  
11 subsequent analysis based on their predictions that showed  
12 exclusivity would lose money and they recommended maintaining  
13 those games if they purchase the studio to be cross platform?

14 A. I'm aware that an evaluation of exclusivity for these  
15 games on this particular studio they had a recommendation not  
16 to go exclusive. In my report I detail this at length and  
17 discuss why it's different than or likely different than the  
18 incentives at issue here with Activision.

19 Q. But at least if you're looking at these numbers, no one at  
20 Xbox was recommending that you withhold these games that you  
21 were comparing your share shift to from multiple platforms;  
22 right? Just a yes or no answer.

23 A. I don't -- maybe I didn't -- I didn't follow the question.

24 Q. No one at Xbox when analyzing these same figures you're  
25 comparing to recommended that they withhold the games of this

1 acquisition target studio because it would be economically  
2 favorable; right? They didn't recommend that, did they?

3 **A.** It's my understanding for this studio they did not  
4 recommend.

5 **Q.** They recommended keeping the games cross platform; right?

6 **A.** It's my understanding that for consoles, they recommended  
7 not exclusive; but for subscription services, they recommended  
8 exclusivity.

9 **Q.** Okay. You don't have a model on subscription services so  
10 we're just talking about the model numbers that you're  
11 producing -- the numbers you're producing from your model.

12 **A.** Okay.

13 **Q.** Right? And based on their modeling, they do not recommend  
14 withholding those games?

15 **A.** On consoles.

16 **Q.** Right. Okay.

17 Now, you also say that survey evidence you've looked at  
18 corroborates your prediction of a 5.5 percent model; right?

19 **A.** There is survey evidence consistent with output from the  
20 20 percent conversion rate.

21 **Q.** And did you familiarize yourself with that survey so you  
22 know what they were measuring?

23 **A.** I believe I am familiar with the survey.

24 **Q.** Okay. And this is the YouGov survey that was done over in  
25 Europe?

1     **A.**    My understanding it's a survey that was commissioned by  
2     Microsoft and presented to the CMA.

3     **Q.**    It was done in Europe not in the U.S.; right?

4     **A.**    Correct.  It's my understanding it was European users.

5     **Q.**    So let's get rid of the share model.

6           And this is the YouGov data we're going to talk about for  
7     a minute to show that you say this also supports your  
8     5.5 percent share shift and your input of 20 percent  
9     conversion; right?

10    **A.**    Yes.

11    **Q.**    Okay.  So this is YouGov and let's start with their world.  
12    Who did they survey?

13    **A.**    It's my understanding they surveyed PlayStation users in  
14    certain countries in Europe as well as those who are looking to  
15    potentially purchase a PlayStation.

16    **Q.**    Potential and purchase, is that what you said?

17    **A.**    I believe the two statistics I cite are among existing  
18    PlayStation owners and those who would potentially purchase a  
19    PlayStation.

20    **Q.**    So the difference, just to be clear, is the existing is  
21    the person A owns a PlayStation and if Call of Duty is  
22    withheld, they're predicting or asking those folks whether they  
23    would go out and buy an Xbox; right?

24    **A.**    I believe it's what would they have done, but I just need  
25    to look at that --

1 Q. Okay.

2 A. -- survey. If you can --

3 Q. And then for potential, they're looking at what they would  
4 do not right then but when a new generation of consoles come  
5 out; right?

6 A. That is my understanding.

7 Q. That's future purchase?

8 A. That is my understanding.

9 Q. Now, they didn't measure all these folks; right? They  
10 measured a subset of these folks; right?

11 A. It's my understanding they surveyed a sample of the  
12 population.

13 Q. And what was the sample population that they surveyed?

14 A. My understanding as was represented by Microsoft it's a  
15 more representative population than the survey conducted by the  
16 CMA. I think it was PlayStation users and those that were  
17 considering purchasing a PlayStation.

18 Q. So you think that was -- that was the world of folks that  
19 they surveyed? There was no other limitation? It was just  
20 people that had PlayStations, played COD, and might switch or  
21 might buy the new Xbox?

22 A. I -- the evidence or the slide deck that I cited to looked  
23 at, it said it surveyed a set of users that were PlayStation  
24 users or potential future PlayStation users, and I believe that  
25 Microsoft described it in a submission to the CMA as a wider

1 set of users, more representative in the CMA.

2 Q. That's what you're saying, that it's wider than the folks  
3 you looked at? It's a broader group than what you looked at?

4 A. It's -- it's people who also do not play Call of Duty, for  
5 example.

6 Q. Okay. Let's hand up Exhibit RX5053. This is the complete  
7 deck; right?

8 MS. WILKINSON: Can I hand it up, Your Honor?

9 THE COURT: Yeah.

10 THE WITNESS: I --

11 BY MS. WILKINSON:

12 Q. This is what you reviewed; right?

13 A. I recall reviewing a different or --

14 (Witness examines document.) I believe the slide deck I  
15 cited to you is a subset of this slide deck, but it is -- it  
16 is -- yeah, it seems to be referring to the survey that I  
17 reference in my initial report.

18 Q. Okay. So it has some of the slides you reference and  
19 more; right?

20 Well, why don't we start so we can see if you're right  
21 about who they surveyed and whether you can compare it. Okay?

22 Look at --

23 MS. WILKINSON: Your Honor, we would move in RX5053.

24 THE COURT: Admitted.

25 (Trial Exhibit 5053 received in evidence.)



1 **BY MS. WILKINSON:**

2 **Q.** And page 6, please. Do you see the sample up at the top  
3 and it says how many people they sampled?

4 **A.** I see that.

5 **Q.** Not filtered based on games played; right?

6 **A.** I see that.

7 **Q.** And then they were asked a question or questions; right?  
8 And they responded to that and that data was used to analyze  
9 whether people would move and how many would move to an Xbox  
10 console; right?

11 **A.** I see that.

12 **Q.** You didn't do a survey; right?

13 **A.** I did not conduct a survey.

14 **Q.** All right. And so they focus specific questions on  
15 favorite games; right? Take a look under the diversion  
16 estimation on that same page, 006.

17 **A.** I see that.

18 **Q.** So they were asking, thinking back about your latest  
19 console purchase, what would they have done if their favorite  
20 or second-most favorite game had not been available on the  
21 console; right? That's for past diversion; right? That's what  
22 it says on page 6; correct, Professor Lee?

23 **A.** I understand that that's what it says on page 6. I'm  
24 looking for the statistic that I cited.

25 **THE COURT:** No, no.

1           **THE WITNESS:** Yeah.

2           **THE COURT:** She's just asking you first about page 6.

3       Okay?

4           **THE WITNESS:** Yeah, that is what it says on page 6.

5       **BY MS. WILKINSON:**

6       **Q.** For future diversion, if -- they ask would they change  
7       their planned console purchase, if they have one, if future  
8       releases of their favorite or second-most favorite game will  
9       not be available on the console the plan -- they plan on  
10      purchasing; right?

11      **A.** I see that.

12      **Q.** So these are very different questions and responses that  
13      they're using to measure or predict conversion than you did;  
14      right? Or market share shift. Sorry.

15      **A.** For this survey, that appears to be a different set of  
16      questions.

17      **Q.** Okay. So you pointed out, I believe, in your report that  
18      this survey would show and result in 5 percent of those folks  
19      would shift; right?

20      **A.** It's referencing the statistic on page 2 of this slide  
21      deck. I -- I -- this slide deck -- yeah, it's a different  
22      slide deck that I reference in my -- in my report.

23      **Q.** Okay. Do you want to turn to those pages so you're more  
24      comfortable with what was done in your report?

25           **THE COURT:** Can you point me to the page in the report

1 you're referring to?

2 **MS. WILKINSON:** Yes. That's what I'm -- I'm sorry,  
3 Your Honor. That's what I'm -- I don't know which one he's  
4 referring to.

5 **BY MS. WILKINSON:**

6 **Q.** So I'm asking, Professor Lee, if there's a page you want  
7 us to look at in your report and which report it's in.

8 **A.** Yes. So the document that I'm referencing -- am I able to  
9 show my demonstratives in my witness binder?

10 **THE COURT:** You can look at them.

11 **THE WITNESS:** Are you able to see them, Your Honor?

12 **THE COURT:** Yeah. But first I want to find -- you're  
13 questioning him about support that he gave for his foreclosure  
14 model number. Where in the report did he give that support?  
15 That's my question for you, Ms. Wilkinson.

16 **MS. WILKINSON:** Yes. And where did he reference?

17 **THE COURT:** Where in PX5000, what page, do I go to see  
18 in the report? You don't know?

19 **MS. WILKINSON:** No. I'm asking him what page he says  
20 discusses the YouGov survey.

21 **THE COURT:** Yes, but you asked him specifically about  
22 this, that he referenced it in his report. Where in his report  
23 did he reference this? That's my question.

24 **MS. WILKINSON:** I'm not sure, Your Honor. That's why  
25 I'm asking him.

1           **THE COURT:** So you don't know.

2           **MS. WILKINSON:** I do know he did --

3           **THE COURT:** Oh, okay.

4           **MS. WILKINSON:** -- I believe; but if he didn't, then  
5 that's also of interest to us.

6           **BY MS. WILKINSON:**

7           **Q.** So did you reference this survey in your report?

8           **A.** On page PX5000-345.

9           **Q.** That's your initial report; right?

10          **A.** This is my initial report, paragraph 762.

11          **Q.** 762?

12          **A.** Correct.

13               (Witness examines document.) And this is -- Footnote 959  
14 is a document that I reviewed and considered.

15                       (Pause in proceedings.)

16          **BY MS. WILKINSON:**

17          **Q.** Okay. So that's on page 345; right?

18          **A.** Correct.

19          **Q.** And it's down in your footnote; right?

20          **A.** Footnote 959.

21          **Q.** Last one on the bottom. And you're referring to the slide  
22 presentation that was done from this data that we were just  
23 looking at, the complete survey information; right?

24          **A.** It's my understanding this was a presentation made to the  
25 CMA is my understanding.

1 Q. Okay. So it's easier for you to reference. Let me give  
2 you that document as well, which is 5054.

3 MS. WILKINSON: And we'd move that into evidence,  
4 Your Honor.

5 THE COURT: All right. Admitted.

6 (Trial Exhibit 5054 received in evidence.)

7 BY MS. WILKINSON:

8 Q. And before you look at it, I just want to ask you a few  
9 questions about it. Okay?

10 5054 is a set of slides that were presented to the EC;  
11 right? Is that right?

12 A. It's my recollection it was the CMA.

13 Q. Okay. But these are slides that were presented to the CMA  
14 summarizing the YouGov survey information, right?

15 A. This is the slide deck I reviewed. That's my  
16 understanding of what the slide deck is.

17 Q. So you reviewed 5054; right?

18 A. I reviewed 5054.

19 Q. Did you, in coming to your conclusions, review RX5053?

20 A. I don't recall that full document. I tried -- my  
21 recollection is I'm trying to find more information.

22 I will note that the slide deck 5054 does not -- I don't  
23 recall having that question asked.

24 On Slide 11 and 12 of 5054, Your Honor, these are the 3  
25 percent and the 5 percent numbers that I referenced, and you

1 will see here that a large fraction of those users are said to  
2 not play Call of Duty.

3 And it's my understanding that if a game is one of their  
4 favorite games, it's odd that a very large percent of them do  
5 not actually play that game. It's strange that, you know, you  
6 don't actually play a game if it's one of your favorite games.  
7 And so my -- just having access to this deck, when I looked at  
8 it, I -- I saw the survey as the whole -- the population of  
9 PlayStation users that didn't condition on whether Call of Duty  
10 was their favorite game.

11 **Q.** Okay. So you didn't understand what the basis of this  
12 slide was? You found it questionable on RX5054-011?

13 **A.** I didn't say I found it questionable. I looked at that  
14 document. I noted that there's a population of PlayStation  
15 users. There is a submission to the CMA by Microsoft that  
16 represented it being a more representative sample.

17 The -- Microsoft raised criticisms of the survey used by  
18 the CMA because they engaged in a sample restriction. They  
19 focused on users who only spent I think over a hundred dollars  
20 or over ten hours on Call of Duty.

21 This one they said, "You know, we want to look at a wider  
22 sample of users." And so they have this YouGov survey. So  
23 with those documents, I evaluated the slide as if it was  
24 looking at the wider population.

25 **Q.** Right. So that it was looking at all gamers, right, who

1 use existing PS or PlayStation gamers? Right?

2 **A.** Are you still representing that it's conditional on it  
3 being their favorite game? I guess I'm just wondering where  
4 are we now in our understanding of this.

5 **Q.** I'm trying to figure out what you knew about this survey  
6 when you said it was consistent with your results.

7 They do not limit it to people who play Call of Duty, do  
8 they?

9 **A.** It's my understanding it's not limited because it has a  
10 significant fraction of users who do not play Call of Duty in  
11 the sample.

12 **Q.** So 66 percent of the people that were surveyed don't play  
13 at all and, therefore, wouldn't switch; right?

14 **A.** For this question, that is the number.

15 **Q.** Okay. And if you look at the next page, which is 012, the  
16 question is: What would gamers plan to buy on PlayStation if a  
17 PlayStation did not have COD? Right? Do you see that?

18 **A.** Yeah. What would gamers planning to buy a PS do if COD  
19 were not on PS?

20 **Q.** Okay. And 31 percent here would play COD but would still  
21 buy the PlayStation; right?

22 **A.** That is what the slide says.

23 **Q.** And it says 5 percent would move to Xbox; right?

24 **A.** If that's what this slide says.

25 **Q.** So do you understand that to be 5 percent of this entire

1 world of folks that use a PlayStation?

2 **A.** I understand it to be 5 percent of the sample of European  
3 users who planning -- people who would plan to buy PS, what  
4 would they do.

5 **Q.** Okay. So it's 5 percent of this big world we've defined;  
6 right?

7 **A.** That is my understanding.

8 **Q.** All right. And that's not the world that you measured,  
9 right, in your foreclosure model?

10 **A.** In paragraph 762 of my initial report in Footnote 958, I  
11 provide a way to convert the conversion rate into something  
12 that is comparable to the --

13 **Q.** Professor Lee, can you answer my question? Did they  
14 measure -- I didn't ask you whether you could convert it. I'm  
15 asking you: Did they measure this -- did you measure the same  
16 or assess the same group of people that the YouGov survey did?

17 **A.** I think the way we started, my analysis started with all  
18 PS users and then I narrowed it down to those who play COD.

19 **Q.** Right.

20 **A.** Global. It's global. I understand the YouGov survey is a  
21 sample of Europe where Call of Duty is less popular is my  
22 understanding.

23 But I looked at the global and then I narrowed it down.  
24 And so what I did is provide you a varied conversion of  
25 20 percent from that smaller circle and figuring go out what



1 the equivalent percentage would be for the big circle. And so  
2 I can do an apples-to-apples comparison then between those  
3 percentages.

4 **Q.** Do you believe that -- so this 5 percent, though, are  
5 people that say COD is their first or second favorite game; is  
6 that right? Or no?

7 **A.** That's not my under --

8 **Q.** They have a first or second game they would play favorite  
9 on PlayStation?

10 **A.** In the slide deck I reviewed I did not see this sample  
11 restriction you're referring to. I note that 64 percent of  
12 people on this slide do not play Call of Duty.

13 **Q.** Right. So Call of Duty can't be their first or second  
14 favorite game; right?

15 **A.** I don't know. I'm just interpreting that it seems  
16 strange.

17 **Q.** Okay. So you don't know is the answer whether this  
18 5 percent are people that say Call of Duty is their first or  
19 second favorite game; right? You don't know the answer to that  
20 question, do you?

21 **THE COURT:** Maybe I can cut through it.

22 You didn't look at the survey itself.

23 **THE WITNESS:** I didn't have -- I don't --

24 **THE COURT:** You only looked at the slides.

25 **THE WITNESS:** I looked at the slides is what I had

1 access to.

2 **THE COURT:** All right. Why don't we take our lunch  
3 break now.

4 **MS. WILKINSON:** Thank you, Your Honor.

5 **THE COURT:** Why don't we resume at 12:35.  
6 All right. Thank you.

7 **THE WITNESS:** Thank you, Your Honor.

8 (Luncheon recess was taken at 11:55 a.m.)

9 **AFTERNOON SESSION**

**12:39 p.m.**

10 **THE CLERK:** Remain seated. Come to order.

11 **THE COURT:** Okay. Are we ready to resume with  
12 Professor Lee?

13 **MS. WILKINSON:** Yes, Your Honor.

14 **BY MS. WILKINSON:**

15 **Q.** Professor Lee, you ready?

16 **A.** Yes.

17 **Q.** Okay. Just a few more areas I want to talk to you about.

18 One of the things you look at after you determine whether  
19 Xbox would have an incentive and ability to foreclose is what  
20 Sony might do in response; right?

21 **A.** I consider potential reactions. I actually explicitly  
22 analyze price effects, what might happen with prices.

23 **Q.** But there's lots of things Sony can do in response to  
24 competition; right?

25 **A.** Generally speaking, yes.

1 Q. And it did that by buying Bungie just days after the  
2 Activision Xbox transaction was announced; right?

3 A. I don't know if it responded, but it did purchase Bungie  
4 after the acquisition was announced.

5 Q. It could do things like that in the future; right?

6 A. I presume that would be the case.

7 Q. And one of the things it could do now before the  
8 transaction is completed is it could come to an agreement with  
9 Microsoft to put Call of Duty and maintain Call of Duty on the  
10 PlayStation; right?

11 A. Generally an agreement requires a meeting of both sides,  
12 but that is a possibility.

13 Q. There's an offer outstanding from Microsoft to Sony that  
14 would allow them to maintain Call of Duty on Sony's platform  
15 for ten years; right?

16 A. It is my understanding an offer is available or made.

17 Q. And like most businesspeople, if they could come to  
18 mutually beneficial terms and sign that agreement, then that  
19 would allow Sony and PlayStation to keep Call of Duty on its  
20 platform; right?

21 A. That's my general understanding of the terms that have  
22 been offered.

23 Q. You didn't include that in your analysis because it hasn't  
24 been signed; right?

25 A. In my analysis I only look at agreements -- I mean, I look

1 at agreements that have been signed. This one, you're correct,  
2 I'm not taking it as given.

3 Q. So there are other agreements that Xbox and Microsoft have  
4 signed with other participants in the market; right?

5 A. In particular markets there are agreements.

6 Q. And those are signed agreements?

7 A. That is my understanding.

8 Q. Suggesting that two parties came to an agreement on  
9 mutually beneficial economic terms; right?

10 A. That is my understanding.

11 Q. And you're going to presume those contracts are going to  
12 be honored; right?

13 A. I presume they are -- the parties have come to an  
14 agreement and those are in effect in my analysis.

15 Q. Now, one of the things that Sony could do, and has done in  
16 the past, is to take a game that was on multiple platforms and  
17 pay to have it only on the PlayStation; right?

18 A. That is my understanding.

19 Q. Okay. And you know they've done that very recently;  
20 right?

21 A. Do you have a particular example?

22 Q. Yes. Do you know the game Final Fantasy XVI?

23 A. I have heard of that game.

24 Q. And do you know that that was on Xbox and PlayStation 5?

25 A. I don't know the consoles it was released on.

1 Q. Well, assuming it was on those platforms last year, I want  
2 you to take a look at RX2073, please.

3 (Pause in proceedings.)

4 BY MS. WILKINSON:

5 Q. Do you see that document?

6 A. I see the document.

7 Q. It's on yellow paper. That means it's confidential and  
8 under seal. So we're just going to refer to it generally.

9 Okay?

10 A. Understood.

11 Q. And, again, this is an e-mail, a Sony e-mail; right?

12 Between folks at Sony; right?

13 A. Yes.

14 Q. And it's dated February 25th, 2022; right?

15 A. Yes.

16 Q. And there's a chart on page 8. Let's take a look at that  
17 chart.

18 (Pause in proceedings.)

19 BY MS. WILKINSON:

20 Q. And you understand that when --

21 A. Excuse me. Is there a chart on page 8?

22 THE COURT: 2073-008.

23 THE WITNESS: Thank you.

24 BY MS. WILKINSON:

25 Q. Do you see that?

1     **A.**    I see that.

2     **Q.**    Okay.   Great.

3           Now, you know that games can be put on a platform under a  
4   general publishing agreement; right?

5     **A.**    That's my understanding.

6     **Q.**    But sometimes folks at Sony or Xbox engage in specific  
7   agreements that provide some limitations or specific agreements  
8   about how that game will be played either on their platform or  
9   put on other platforms; right?

10    **A.**    That's my understanding.

11    **Q.**    And that's not unusual?  You've seen those partial or  
12   total exclusive arrangements; right?

13    **A.**    I have seen similar types of arrangements.

14    **Q.**    Now, look at this, and this is looking at FY22; right?

15    **A.**    Yes.

16    **Q.**    And do you see down there on the left all of those are  
17   measured as global; right?

18           **MS. BENNETT:**  Your Honor, can we talk around the  
19   document a little bit more?

20           **THE COURT:**  Well, I don't know that --

21           **MS. WILKINSON:**  I'm not going to go into any more  
22   detail.  It's just that that --

23           **THE COURT:**  Than that, okay.

24    **BY MS. WILKINSON:**

25    **Q.**    Those are -- the region is global for each of those;

1 right?

2 A. I see that.

3 Q. It doesn't say U.S. only; right?

4 A. I see that.

5 Q. Okay. So go down one -- one, two, three -- the third game  
6 there. Do you see that?

7 A. I see that.

8 Q. And that game is published by another publisher not Xbox  
9 or PlayStation 5; right?

10 A. Yes, it is not published.

11 Q. Right. It says what genre it is; right?

12 A. Yes.

13 Q. And it says -- it looks like an estimate of total  
14 revenues; right?

15 A. I do not know what the -- that column represents.

16 Q. Now turn to page 013, a different chart. And you see the  
17 title of that chart for FY22 -- I don't want to read it out  
18 loud -- but do you see the title of that chart?

19 A. I see that.

20 Q. Okay. And this involves some contracts; right? It says  
21 "contracted"? That part we can say.

22 A. I see that word.

23 Q. All right. Now, go down to the second game. Do you see  
24 that?

25 A. Yes.

1 Q. That's the same game we were pointing out on the last  
2 chart; right?

3 A. Yes.

4 Q. And in the last column, it describes how that game will be  
5 shown in terms of what platform; right?

6 A. I see that the term is there.

7 Q. You see the heading for the term?

8 A. Yes.

9 Q. And you accept that that's what Sony is talking about when  
10 they're talking about this game on this -- in this chart;  
11 right?

12 A. I understand. I believe so.

13 Q. Okay. Now, Sony has many first-party exclusive games;  
14 right?

15 A. That is my understanding.

16 Q. And it also has some third-party games that it pays to  
17 have exclusive or at least for periods of time; right?

18 A. I believe that is the case.

19 Q. Okay. Take a look at RX2098.

20 A. (Witness examines document.)

21 Q. Do you see that document?

22 A. I do.

23 Q. I want to ask you when a third-party game is taken  
24 exclusive to one platform, let's just say it's PlayStation, is  
25 that an advantage for PlayStation?



1     **A.**    It depends what the comparison would be absent the  
2     exclusivity.  So when making a comparison of an advantage or if  
3     something is harmful, it's important to specify what the  
4     but-for alternative is.

5     **Q.**    So you can't -- and I know you won't because of your prior  
6     writings -- you won't say that exclusive games themselves are  
7     harmful to competition?

8     **A.**    Exclusivity can have both pro and anticompetitive effects.

9     **Q.**    Now, take a look at this.  This is --

10           **MS. WILKINSON:**  Can we show a redacted copy of that or  
11     no?  We can't.  Okay.

12     **BY MS. WILKINSON:**

13     **Q.**    So take a look at RX2098.  And you see that again this is  
14     a Sony e-mail; right?

15     **A.**    Yes.

16     **Q.**    And it's dated October 12th, 2022; right?

17     **A.**    Yes.

18     **Q.**    And down in the second e-mail, do you see that it says hi,  
19     so and so best from someone else?  Do you see that?

20     **A.**    I see the second e-mail, yes.

21     **Q.**    And when you look at that, do you see a discussion about  
22     comparing this type of treatment of games between two  
23     platforms.

24     **A.**    (Witness examines document.)  Sorry.  I was reading it.

25     Can you repeat your question, please?

1 Q. Yes. Doesn't this discuss a comparison between treatment  
2 of games on one platform versus how many of those are on  
3 another platform?

4 A. The e-mail is making a comparison like that.

5 Q. And, again, in and of itself, taking games exclusive is  
6 not automatically anticompetitive or harmful to competition?

7 A. I don't think a general statement can be made without  
8 further details.

9 Q. Can a new game that's made exclusive be a response to a  
10 competitor?

11 A. In sort of a hypothetical world, it -- many things are  
12 possible.

13 Q. What if a game had been on Xbox and PlayStation and it was  
14 taken off for the next, you know, version of the game and only  
15 put on PlayStation? Do you think that's a response to  
16 competition?

17 A. I'm not clear I follow.

18 Q. Okay. So a game is multiplatform and the next year when  
19 the next version is coming out, one of the platforms pays to  
20 keep it for a certain time period only on their platform and  
21 it's no longer available on the other platform.

22 A. Under that hypothetical, what is the question?

23 Q. Is that a competitive response?

24 A. I don't know what you mean by "competitive response." A  
25 response to what?

1 Q. To the other competitor who had it on its platform before.

2 A. Without understanding more about the hypothetical, I'm not  
3 quite sure --

4 Q. Okay.

5 A. -- I know how to answer that question.

6 Q. So, even when a game is on multiple platforms and it's  
7 removed from a competitor's platform, it's not automatically  
8 anticompetitive you said; right?

9 A. Exclusivity is not automatically anti or pro competitive.  
10 It depends on, for example, if the game is different as a  
11 result of the exclusivity for example, it's comparing against  
12 without the exclusivity what would have happened --

13 Q. And --

14 A. -- is an important consideration.

15 Q. Sorry. And you're saying without more knowledge, you  
16 can't say whether by removing it from the competitor's platform  
17 for a certain time period, whether that's a competitive  
18 response or not?

19 A. Again, without the hypothetical, I'm not quite sure what  
20 response you're referring to.

21 Q. Okay. Let's end by talking about what's going to happen  
22 if the merger goes through and if it does not. Okay?

23 A. Okay.

24 Q. And what the status is today. So I'm going to ask you  
25 some questions first, and then we're going to put up a chart so

1 we don't have to see my handwriting and see if we can make it  
2 clear.

3 All right. I'm going to ask you about COD on certain  
4 platforms and whether they're on today, whether they will be on  
5 after the merger -- okay? -- and whether they will be on, let's  
6 assume the merger doesn't go through, the day after. So the  
7 but-for world right after the merger does not go through.

8 Okay?

9 A. Okay.

10 Q. We can pick a date. You want to say October 1st? Let's  
11 say the merger doesn't go through -- okay? -- by October 1st,  
12 I'm just picking a date that gives us a few months out, and  
13 what will happen after that. Because we're talking about what  
14 the world looks like with the merger and what it looks like  
15 without; right?

16 A. The merger world and but-for world are both uncertain,  
17 they're in the future, and there's not a precise clarity on  
18 that particular date something will or will not happen.

19 Q. Correct, exactly. So you're -- with the but-for world,  
20 you're trying to predict what will happen without the  
21 transaction?

22 A. It's forward looking what would happen without the  
23 transaction.

24 Q. Your point is you don't know that for certain?

25 A. It's difficult to predict the future for certain.

1 Q. Correct. So you're just trying to determine from what  
2 happened before the transaction and what's going on what you  
3 think is going to happen in the market, what it will look like  
4 without the transaction?

5 A. So my economic analysis is comparing a future world with  
6 the merger against a future world without the merger.

7 Q. And in the future world without the merger, the only  
8 change is that the merger doesn't occur; right?

9 A. That is a primary difference between the with merger and  
10 the but-for world.

11 Q. Okay. So let's try this: We're talking about COD; right?

12 A. Okay.

13 Q. Okay. Today is it on Xbox console?

14 A. That is my understanding.

15 Q. Is it on the PlayStation 5?

16 A. That is my understanding.

17 Q. Is it on the PC?

18 A. That is my understanding.

19 Q. Is it on Nintendo?

20 A. It is my understanding it is not on the Switch console.

21 Q. And let me just ask Roger.

22 MS. WILKINSON: Roger, can you put up just that column  
23 first and cover the other two while we're going through it?

24 No, you cannot. Sorry. That's my fault.

25 \\\

1 **BY MS. WILKINSON:**

2 **Q.** It's not on GeForce; right? Or it's not able to be  
3 streamed on GeForce today; right?

4 **A.** It's my understanding Call of Duty is not available on  
5 GeForce NOW.

6 **Q.** Nor on Boosteroid; right?

7 **A.** That is my understanding.

8 **Q.** Ubitus no?

9 **A.** My understanding that it's not, that is my understanding.

10 **Q.** Nware?

11 **A.** No.

12 **Q.** And EE; right?

13 **A.** Not to my understanding.

14 **Q.** So let's go with the merger. It's going to be on Xbox;  
15 right?

16 **MS. WILKINSON:** You can show this now, Roger. And  
17 you're going to check my work. If you don't agree, we'll  
18 change it.

19 **BY MS. WILKINSON:**

20 **Q.** Okay. So with the merger, it's going to be on Xbox;  
21 right?

22 **A.** That is my -- it will likely be on Xbox, that's my  
23 understanding. It will likely be on Xbox.

24 **Q.** And with the merger, you don't agree that it will be on  
25 PlayStation or you do?

1   **A.**    I don't agree it will be on PlayStation for certainty. It  
2    is difficult to predict the future. I think the likelihood of  
3    Call of Duty on PlayStation is lower with the merger than  
4    without the merger. My analysis looks at all Activision  
5    content and that there's likely foreclosure as a result of the  
6    merger.

7    **Q.**    You understand the comparison is not whether it's more  
8    likely with the merger or without; it's is it likely with the  
9    merger?

10   **A.**    I looked at -- the chart is no longer on my screen.

11   **Q.**    I'm just asking you, this column just when you compare the  
12    but-for world is: Is it likely to be on with the merger?

13   **A.**    My economic opinion is that it's likely that foreclosure  
14    of Activision content will occur with the merger in the console  
15    markets.

16           **THE COURT:** What about Call of Duty?

17           **THE WITNESS:** It's difficult -- because foreclosure  
18    can take many forms and it's difficult to predict with  
19    certainty the exact form that foreclosure will take.

20           I noted that -- one of my conclusions is that the merged  
21    firm will have a likely economic incentive to take titles like  
22    COD exclusive; but to predict what will happen due to the  
23    merger, there's uncertainty. And my analysis informs the  
24    probability of foreclosure -- of complete foreclosure but also  
25    partial foreclosure potentially happening. So my conclusion is

1 that Activision content overall will likely be foreclosed in  
2 console markets. Does that --

3 **THE COURT:** What about Call of Duty?

4 **THE WITNESS:** Yeah, for Call of Duty it's difficult to  
5 give a precise, like --

6 **THE COURT:** Is it likely or not likely? And it's  
7 post-2025, right? Because there is a contract, there's been  
8 lots of testimony, through 2024. So you're not saying it's  
9 likely to be foreclosed prior to the expiration of that  
10 contract.

11 **THE WITNESS:** That's -- I'm not looking at prior to  
12 the contract expiration. So my conclusion is really about all  
13 of Activision content and not taking a stance on --

14 **THE COURT:** You don't have an opinion just about Call  
15 of Duty?

16 **THE WITNESS:** I noticed it's an economic incentive and  
17 there's reasons why firms -- firms as economists tend to put in  
18 their economic incentives, but it is difficult to predict a  
19 particular likelihood on complete foreclosure on Call of Duty.

20 **THE COURT:** One way or the other you can't say?

21 **THE WITNESS:** It's more likely than --

22 **THE COURT:** You can say?

23 **THE WITNESS:** No. It's more likely without the merger  
24 to be foreclosed.

25 **THE COURT:** Call of Duty?



1           **THE WITNESS:** Call of Duty with the merger than  
2 without the merger.

3           **THE COURT:** But more -- but I see, comparatively --

4           **THE WITNESS:** Comparatively.

5           **THE COURT:** -- you're not prepared in your opinion to  
6 say it is with the merger likely to be more likely than not?

7           **THE WITNESS:** For that particular content, but overall  
8 Activision content likely, that Activision content. I under --  
9 yeah.

10          **THE COURT:** I see. I understand.

11          **THE WITNESS:** Yeah.

12   **BY MS. WILKINSON:**

13   **Q.** Okay. Let's go back, put our chart up.

14           And so we're just saying with the merger, like Her Honor  
15 was trying to ask you -- and if you say you don't have an  
16 opinion, not comparing it to without, just after the merger is  
17 it likely to be on PlayStation? Should we put a question mark  
18 there instead of a check?

19   **A.** I don't know what you would like to put there. I  
20 expressed my opinion.

21   **Q.** Right. So you can't tell us whether it's likely to be on,  
22 not certainty but whether it's likely to be on PlayStation  
23 after the merger and post-2024?

24   **A.** I'm not expressing an opinion on that precise probability.

25   **Q.** We'll use a question mark then to say.

1 For PC it will be on after the merger; right?

2 **A.** Likely.

3 **Q.** Okay. It will be on Nintendo; correct?

4 **A.** I note in my report there is some uncertainty of the  
5 technical feasibility of bringing Call of Duty to  
6 Nintendo Switch so I -- I don't express opinion on the  
7 probability, but I evaluate the competitive effects as if it's  
8 likely to be on Switch. So I account for that possibility that  
9 it will likely be on Switch as a result of the merger.

10 **Q.** So does that mean I can check the box and say you think  
11 it's likely it will be subject -- you're not saying the  
12 technical challenges will stop it from being on Nintendo, are  
13 you?

14 **A.** I'm saying there's evidence that it's uncertain; but for  
15 the purposes of evaluating or conducting my evaluation, I am  
16 treating it as it will be on -- or likely be on -- let me step  
17 back.

18 I'm not providing an economic opinion on the probability  
19 of that happening.

20 **Q.** Okay. There's a contract signed now between Microsoft  
21 Xbox and Nintendo to put it on Nintendo; correct?

22 **A.** Correct.

23 **Q.** All right. But in this box you want me to put a question  
24 mark because you're not opining on it?

25 **A.** I'm not opining, but I am -- my analysis --

1           **THE COURT:** He's saying it is likely.

2           **THE WITNESS:** Yeah, it is likely. It is likely.

3           **BY MS. WILKINSON:**

4           **Q.** It is likely so we can check the box.

5           Okay. And how about in Xbox Game Pass?

6           **A.** With the merger?

7           **Q.** Yes.

8           **A.** Likely.

9           **Q.** Likely.

10          Okay. And it -- I'm not sure I made this clear, but it's  
11 not on Game Pass now; right?

12          **A.** No, that's not my understanding.

13          **Q.** And after the merger, will it likely be streamed on  
14 GeForce?

15          **A.** My understanding is likely, yes.

16          **Q.** Okay. And will it likely be streamed on Boosteroid?

17          **A.** Yes.

18          **Q.** On Ubitus?

19          **A.** Yes.

20          **Q.** And Nware?

21          **A.** Yes.

22          **Q.** And EE; right?

23          **A.** It's my understanding that's -- yeah.

24          **Q.** Okay. Now we can pick any date you want. Let's say we  
25 have -- we have a break date on July 18th so why don't we pick

## LEE - CROSS / WILKINSON

1 July 19th. Okay? So there's no merger on July 18th.

2 A. Okay.

3 Q. Okay? And it will -- it will -- do you believe it will  
4 still be on Xbox if the merger doesn't go through?

5 A. Yes.

6 Q. Okay. Do you believe it is likely to be on PlayStation?

7 A. Yes.

8 Q. Okay. Do you believe it will be likely to be on PC?

9 A. Yes.

10 Q. Do you believe it's likely it will be on Nintendo?

11 A. Uncertain.

12 Q. That's a question mark.

13 Okay. What about on Xbox Game Pass?

14 A. Uncertain.

15 Q. Okay. GeForce?

16 A. I think for the rest --

17 (Witness examines document.) I can explain my analysis  
18 it's uncertain, but there are reasons to suggest it might be  
19 more likely --

20 Q. So for the rest --

21 A. -- for them.

22 Q. -- of these streaming services we've been discussing, we  
23 should put a question mark in the rest of those too?

24 A. If you would like to.

25 Q. Well, I'm just -- we're trying to reflect your answers

**LEE - REDIRECT / PASTORE**

1 so --

2 **A.** It's uncertain.

3 **Q.** Okay. We'll do that.

4 **MS. WILKINSON:** That's all I have, Your Honor.

5 **THE COURT:** Okay. Any redirect?

6 **MR. PASTORE:** Yes, Your Honor.

7 **REDIRECT EXAMINATION**

8 **BY MR. PASTORE:**

9 **Q.** Good afternoon, Dr. Lee or Professor Lee. I'm sorry.

10 **A.** Good afternoon.

11 **Q.** So Counsel for Microsoft was just discussing your analysis  
12 of Call of Duty content in particular with regards to the  
13 likelihood of foreclosure. Why did you analyze all Activision  
14 content?

15 **A.** I think it's important to understand that Activision  
16 produces many games -- or I'm sure Your Honor knows that -- and  
17 that all Activision content is -- can be valuable and  
18 meaningful for competition. There can be future games that are  
19 developed and also there is non-Call of Duty content that is  
20 popular on consoles.

21 As well for subscription services and cloud streaming  
22 services there is evidence that catalog content and content  
23 that's not just Call of Duty is also meaningful for the  
24 competitiveness of one of those services.

25 And so I think it's important to expand the analysis to

1 look beyond current content, that is catalog content, content  
2 that was released a few months or a year prior, and other  
3 content that Activision produces as well as could produce in  
4 the future.

5 **THE COURT:** But there are a lot of popular games, not  
6 just Activision; right? And there's no way of predicting  
7 what's going to be the popular game.

8 **THE WITNESS:** It's difficult --

9 **THE COURT:** Are you suggesting, then, that, whether it  
10 be Sony -- because we would be here if it was Sony acquiring  
11 Activision as well no question; right? -- that any purchase of  
12 a publisher then is going to have anticompetitive effects  
13 because they always have an incentive then to make it  
14 exclusive?

15 Or is this particular to Activision? If it's particular  
16 to Activision, I think it's pretty clear it's driven by Call of  
17 Duty, which is a unicorn; right? It's a unicorn in the  
18 durability and the popularity and the numbers. It certainly  
19 stands out separately. You were here for Mr. Ryan's testimony,  
20 and that made it clear that that's the concern is Call of Duty.  
21 So I don't quite understand what you're saying.

22 **THE WITNESS:** Okay. I apologize.

23 I think it's true that Call of Duty is very, very  
24 important to the competitiveness of -- you know, it's like you  
25 said, it's a unicorn. It's differentiated.

1 I do think, though, that the supply of new content,  
2 there's evidence that it's scarce. These AAA games don't come  
3 up that frequently so I -- you know, let's put the Call of Duty  
4 aside. It's not the case that there are many other  
5 replacements for Activision content, not just restricted to  
6 Call of Duty.

7 If, for example, entrants or smaller streaming services  
8 might very well benefit from having access to more content  
9 that's provided by Activision as opposed to not having access  
10 to it at all if it were foreclosed to them.

11 **THE COURT:** Okay. But I guess I'm still trying to say  
12 when you analyzed it that all of Activision's content, why --  
13 I guess why didn't you analyze Call of Duty separately as to  
14 whether it was likely or the incentive to make that exclusive  
15 or that you don't have an opinion, I guess I should say?

16 **THE WITNESS:** So I had -- my economic opinion is that  
17 it's -- the merged entity has a likely economic incentive to  
18 foreclose Call of Duty as well as other Activision titles. And  
19 I note that, you know, an economist thinks firms tend to act in  
20 their economic interests, but there is, you know, some  
21 uncertainty in the future.

22 And so for the proposed transaction to necessarily likely  
23 lead to foreclosure, I'm allowing for the possibility it  
24 doesn't necessarily take the form of, say, a full foreclosure  
25 or full exclusivity with respect to Call of Duty. The analysis

1 also applies to these other pieces of content which I think can  
2 still meaningfully affect --

3 **THE COURT:** Like what? Give me an example because  
4 there's so much content there. I mean, that's what I'm just --  
5 that's what I'm trying to figure out.

6 **THE WITNESS:** Sure. I think --

7 **THE COURT:** I mean, all the testimony has been about  
8 Call of Duty in this case. That's what it is, Call of Duty.

9 **THE WITNESS:** I think there's another game, for  
10 example, that Activision released called Diablo, that is my  
11 understanding, did very well. That was released a few weeks  
12 ago. That's an Activision title.

13 They have, it's my understanding, catalog content and  
14 other franchises I think.

15 (Pause in proceedings.)

16 **THE WITNESS:** I think there's a game Tony Hawk is my  
17 understanding. Other games -- I don't want to -- I don't  
18 recall all the names, but there's evidence that the catalog of  
19 even older Call of Duty content is important as well for these  
20 streaming services. I think --

21 **THE COURT:** For the streaming so you're --

22 **THE WITNESS:** For streaming and --

23 **THE COURT:** Well, are you talking about the  
24 subscription services or the cloud?

25 **THE WITNESS:** Both. I'm sorry. My language isn't



1 precise. Subscription services and cloud streaming services.

2 **THE COURT:** Okay. So when you're talking about all  
3 the Activision, you're now really talking about the cloud and  
4 the streaming as opposed to the console; right? When we're  
5 talking about console and you were talking about your vertical  
6 foreclosure theory, you're really talking about Call of Duty  
7 driving people to change or -- or purchase an Xbox; but what  
8 you're saying is when you're talking about the cloud or the  
9 subscription services, you're saying it's the catalog.

10 **THE WITNESS:** The catalog as well.

11 I do know with Diablo it can have an effect on console  
12 sales. It can affect consumer demand. So, a title like Diablo  
13 if it's removed from PlayStation, it can still harm consumers,  
14 and I have a quantification of that.

15 It's not going to be as large as removing Call of Duty;  
16 but if, you know, Diablo is removed or a title like Diablo is  
17 removed from Sony PlayStation, consumers there, absent other  
18 benefits, would generally be harmed because, you know, they  
19 just have less content available to them. The product they  
20 bought is worse.

21 **THE COURT:** Well, if it becomes exclusive.

22 **THE WITNESS:** Yeah, that's right. That's right. So  
23 even the console market, current content, if it's taken  
24 exclusive, can harm consumers if there aren't offsetting  
25 benefits.

1           **THE COURT:** But if something is in a subscription  
2 service versus not in a subscription service, doesn't that  
3 benefit consumers?

4           **THE WITNESS:** I -- it can. I think in the  
5 subscription service market, my economic opinion is that it's  
6 more likely rivals to Game Pass will be foreclosed from  
7 Activision content. So a company like PlayStation Plus may be  
8 less likely because of the merger to be able to get access to  
9 Activision content.

10           **THE COURT:** Do you have an opinion as to whether  
11 PlayStation Plus has actually tried to get access to certain  
12 games or whether it has the same even business model or goals  
13 as X Pass [sic]? And I'm just thinking about some of the  
14 testimony we heard from Mr. Ryan. I mean -- right? Isn't --  
15 do you take that into account?

16           **THE WITNESS:** I do. My recollection of the testimony  
17 of Mr. Ryan, I think back to it, he was mentioning they focus  
18 on catalog content. He wasn't looking for day and date or new  
19 releases.

20           And I provide some evidence in my direct testimony that  
21 Game Pass, most usage is on games that are released more than  
22 six months ago. I think the majority of game time is on older  
23 catalog content, and so that supports the idea that streaming  
24 services -- I'm sorry -- subscription services do kind of  
25 depend on the whole catalog and not just new releases to

1 attract consumers.

2 **THE COURT:** All right. Sorry. Go ahead.

3 **MR. PASTORE:** No worries.

4 **BY MR. PASTORE:**

5 **Q.** And, Professor Lee, we've talked about something called  
6 partial foreclosure a bit today. What is partial foreclosure?

7 **A.** Partial foreclosure is a term that generally refers to  
8 strategies. It is also referred to as partial exclusivity. So  
9 time exclusives, exclusive add-on content, or content that  
10 might be not optimized or degraded relative to another version.

11 **Q.** So is partial foreclosure solely purposefully degrading  
12 content?

13 **A.** No. As I mentioned, there are other forms of partial  
14 foreclosure. And it's important to remember, like, it's a  
15 comparison to what would have happened but for that action;  
16 right?

17 So partially foreclosed could be there would have been  
18 equal versions produced on two consoles; but in the other  
19 world, there's still two versions but just one is just not as  
20 optimized or it doesn't have all of the same features as the  
21 other.

22 **Q.** And has Microsoft acknowledged -- have you seen evidence  
23 or have you considered evidence of Microsoft acknowledging the  
24 benefits of such partial foreclosure?

25 **A.** I have seen evidence that Microsoft does, for example,

1 engage in timed exclusives, for example, with regards to  
2 subscription services, and -- yep.

3 **Q.** And to tie it all together, Professor Lee, what evidence  
4 have you seen regarding the likelihood that the merged entity  
5 will engage in partial foreclosure or is likely to engage in  
6 partial foreclosure if this transaction goes through?

7 **A.** I think it's important to note that, you know, although  
8 most of my quantitative analysis focuses on total foreclosure,  
9 that is the form of exclusivity that is -- it tends to be most  
10 often seen in this industry.

11 Most of Microsoft's first-party titles are fully exclusive  
12 and that the economic incentives for full and partial  
13 exclusivity are very similar; right? They both have the core  
14 economic incentive of trying to steer consumers away from  
15 rivals to one's own console or subscription service.

16 **Q.** And so do you think that partial foreclosure can harm  
17 consumers?

18 **A.** Like exclusivity, it can be both pro and anticompetitive  
19 and have similar effects.

20 **Q.** So, sorry, to put it --

21 **A.** Yeah.

22 **Q.** -- to ask a better question, do you think that partial  
23 foreclosure could affect competition?

24 **A.** Yes.

25 **Q.** I want to turn back to something Microsoft's Counsel

1 discussed with you a bit earlier in her cross-examination and  
2 just ask you directly: Professor Lee, can you explain why you  
3 exclude PCs from your console markets?

4 **A.** Yes. So the economic framework I use to support my  
5 antitrust product markets is the hypothetical monopolist test.  
6 It asks for a set of products, if one firm owned those  
7 products, could it profitably implement -- or would it  
8 profitably implement a small but significant increase in price,  
9 like a 5 percent price increase. And the question is: Is  
10 there enough substitution outside the market so the monopolist  
11 wouldn't want to do that?

12 And I provide evidence in my report and in my testimony  
13 that indicates PCs would not constrain such a monopolist from  
14 increasing prices on all video game consoles or on Gen 9  
15 consoles.

16 **Q.** And is this still the case given that you can, as you  
17 discussed, play Call of Duty on an Xbox or a PC?

18 **A.** That's right. The question here is: For example, you  
19 know, would a price increase lead so many consumers to switch  
20 away from a PlayStation or an Xbox console?

21 **THE COURT:** You know what? Maybe I didn't understand,  
22 but when you were talking about the vertical foreclosure theory  
23 and you had your Venn diagram, you excluded from that people  
24 who played Call of Duty on the PC, you excluded them from those  
25 who might convert to the Xbox -- I mean, yeah, to the Xbox for

1 Call of Duty.

2 Doesn't that suggest that playing on the PC is then a  
3 substitute for the console if making Call of Duty exclusive to  
4 the Xbox wasn't enough to make them migrate to buy the Xbox?

5 **THE WITNESS:** That's a good question, Your Honor. So  
6 in my vertical foreclosure model I look at these folks who  
7 might own a PlayStation and a PC, and I note that some of the  
8 PC users, they may not want to play on the PC. It's not as --  
9 it's not a similar experience as playing on the console. And  
10 so there's still some folk who own a PC and a PlayStation who  
11 can buy an Xbox, but I still admit that there are some folk  
12 who -- who would choose to play on the PC.

13 Now, that form of substitution, where I play a game, is  
14 different than asking the question: You know, if I'm a  
15 customer who would have bought an Xbox or PlayStation and they  
16 got more expensive, would I go out and buy a brand-new gaming  
17 PC? Like, gaming PCs, they're multipurpose. They can be  
18 \$1500; whereas, these consoles are \$500. So if a consumer who  
19 saw a PlayStation go up by \$25, are they more likely to buy an  
20 Xbox or by a brand-new gaming PC?

21 **THE COURT:** Well, A gaming PC you can do other things  
22 with; whereas, the Xbox there's only one thing you can do with.

23 **THE WITNESS:** Absolutely, and in that sense PCs are  
24 differentiated significantly from consoles. They're  
25 multipurpose devices.

1           So that's what -- that hypothetical monopolist test is  
2           sort of asking the question: For the consumer who would have  
3           bought a console and the console has got more expensive, where  
4           are they substituting to? Are they going to substitute to PCs  
5           or are they probably more likely going to substitute within  
6           video game consoles?

7           **THE COURT:** Okay. I guess I just -- why wouldn't they  
8           substitute to a PC in which they get so much more value out of  
9           it? Like, they can play their games, but they can also then  
10          get \$1,000 worth of everything else that we mostly do with our  
11          PCs.

12          **THE WITNESS:** Well, I think there are some consumers  
13          who might choose to do that. I think like in my testimony and  
14          my reports, I provide evidence that, you know, PlayStation and  
15          Xbox benchmark their pricing against each other.

16          What that means is, like, if one of them increases the  
17          price, the other considers matching the price. And if a lot of  
18          the customers are buying PCs, it's not clear why the past price  
19          is the only relevant distribution or the most relevant  
20          consideration for the Xbox price. Does that make sense?

21          **THE COURT:** I see what you're saying.

22          And then let me ask you, because the Xbox -- is it the  
23          Xbox S has the price similar to the Nintendo Switch?

24          **THE WITNESS:** Yes, the S is the lower-priced console.

25          **THE COURT:** Doesn't that suggest that it's -- I

1 mean -- I mean, it seems to me the obvious inference is that  
2 was done to compete with the Switch.

3 **THE WITNESS:** So that's right. Well, there's the  
4 Series X and the PlayStation 5 and the S is still in that  
5 market. So if you're thinking about, like, a price increase,  
6 think about a price increase on the X, who are the customers  
7 who buy the X console? Are they more likely to switch to the  
8 PlayStation 5 or to a Switch? Right?

9 So this exercise of market definition, you can evaluate a  
10 price increase on any of the products in the market. So, you  
11 know, this hypothetical monopolist who owns all the Gen 9  
12 consoles, it doesn't have to increase the price just on the S.  
13 It can choose to exercise a price increase on the PlayStation 5  
14 or the X.

15 **THE COURT:** Because those people will stick to it?  
16 And how do you determine which are those? Like, they're the  
17 people who play how many hours a day versus -- I mean, I'm just  
18 wondering. You're the economist. I'm not. I'm just a judge.

19 Like, how do you even -- how do we even know; right?

20 **THE WITNESS:** There's a lot of qualitative and  
21 quantitative evidence one can look at that informs the extent  
22 to which consumers substitute between these products. I just  
23 mentioned one piece of evidence is evidence that these firms  
24 benchmark each other for pricing. That's pretty strong  
25 evidence that they see each other as the closest price



1 constraints on one another.

2       There's, you know, more sophisticated -- like a little bit  
3 more sophisticated economic modeling you can sort of compute:  
4 Well, if PlayStation increased the price, what's the minimum  
5 percent of folk who have to go to an Xbox? So a price increase  
6 would be profitable.

7       And I compute that number and, you know, provide evidence,  
8 like, well, as long as more than about 10 or 15 percent of folk  
9 who leave an Xbox would go to a PlayStation or vice verse, a  
10 hypothetical monopolist who owned all those consoles, Gen 9  
11 consoles would find a 5 percent increase likely profitable.

12 **BY MR. PASTORE:**

13 **Q.** Just one more point about the PC gaming, Professor Lee.

14       Is your understanding that the PC games are, you know,  
15 many times played on the Windows operating system?

16 **A.** It's my understanding that many PC games are in Windows.

17 **Q.** Windows operating system, is that a Microsoft product?

18 **A.** It's my understanding Windows is a Microsoft product.

19 **Q.** So for those gamers you're talking about that might go to  
20 PC versus buy an Xbox, does Microsoft benefit at all from that  
21 switch?

22 **A.** They may still benefit if they purchase a Windows PC.

23 **Q.** I want to talk about your share model a little bit.

24       And as Microsoft's Counsel spoke with you extensively  
25 about, you know, you used Generation 8 data in your share

1 model. Can you please explain why you used Generation 8 data  
2 in that share model?

3 **A.** Sure. So the share model is trying to look at the impact  
4 of new exclusive titles or the impact of exclusive titles on  
5 hardware sales, and for that kind of exercise it's useful to  
6 have a long period of data.

7 So Gen 9 I had from 2013 to 2020. Gen -- sorry. Gen 8 I  
8 had from 2013 to 2020. Gen 9 less data to work with. Also  
9 Gen 9 there were well-documented supply shortages in consoles.  
10 So if there's something like a supply shortage affecting sales  
11 of consoles, it's going to be difficult to really tease out the  
12 relationship between software and hardware sales.

13 And for those reasons I use Gen 8 data to inform the  
14 likely effects of exclusivity on hardware sales.

15 **Q.** And then for your vertical foreclosure model, you then  
16 considered Gen 9 data; is that -- am I remembering that  
17 correctly?

18 **A.** That's correct.

19 **Q.** So why do you use Gen 9 data in your vertical foreclosure  
20 model?

21 **A.** The role of the vertical foreclosure model is to look at  
22 the economic incentives to engage in foreclosure in the future,  
23 and so it used projections of Activision sales going forward.

24 **Q.** I'm going to point you to a demonstrative which we've been  
25 asked to hold confidential.

1           **MR. PASTORE:** So I will just point him to it,  
2 Your Honor, and we'll ask questions around it.

3 **BY MR. PASTORE:**

4 **Q.** Professor Lee, could you please turn to Demonstrative 11?  
5 It's on page 11 of the demonstratives. Let me know when you're  
6 there.

7 **A.** (Witness examines document.) I'm on that page.

8 **Q.** And can you -- can you generally describe for Her Honor  
9 what this -- what this demonstrative represents?

10 **A.** Sure.

11 Your Honor, on Slide 11 is output from the share model.  
12 What it's doing is plotting for a set of AAA titles during  
13 Generation 8 on the vertical axis what is the predicted change  
14 in Xbox shares from taking that title exclusive, and you'll see  
15 that for many of those dots, they're kind of below -- are all  
16 the numbers under seal?

17 **Q.** I defer to --

18 **MR. PASTORE:** Yes?

19 **MS. WILKINSON:** Yes.

20 **MR. PASTORE:** Yes. Apologies. So we'll have to be a  
21 little vague here.

22 **THE WITNESS:** So you'll see the numbers and that's the  
23 predicted share shift for taking many of those titles  
24 exclusive.

25 And you'll see for a lot of the AAA titles most of them

1 are kind of within or below the range we were talking about  
2 before for U.S. share shifts.

3 What you'll also see on this chart are these red dots and  
4 those are titles that are part of the Call of Duty franchise,  
5 and you'll note that those red dots have a much higher  
6 predicted change in Xbox shares if they're taken exclusive, and  
7 that's because they're sort of higher on the graph. They're  
8 more towards the top of the graph.

9 And you might ask: Well, why is that the case? Well, if  
10 you also look on the horizontal part, you'll see that those  
11 Call of Duty titles sell many more units than many of the other  
12 blue dots; right?

13 And so the share model is predicting that, well, titles  
14 that have greater sales, they're more popular, more users play  
15 those games are predicted to have a bigger impact on the shares  
16 of hardware consoles.

17 **BY MR. PASTORE:**

18 **Q.** If you could briefly flip to the previous slide in your  
19 demonstrative. I believe this one is also confidential. So  
20 we'll have to speak around it a little bit.

21 But do you see the quote on the slide?

22 **A.** I do.

23 **Q.** And these -- these --

24 **MS. WILKINSON:** It's not confidential so you can use  
25 it.

1           **MR. PASTORE:** Oh, it's not? Oh, okay.

2           Apologies. It's not confidential so we can put it on the  
3 screen.

4           Thank you, Beth.

5           **MS. WILKINSON:** Sure.

6           **BY MR. PASTORE:**

7           **Q.** And so it reads an exclusive AAA release accounts for 2 to  
8 4 percent console share shift in the U.S. and the 1 to  
9 3 percent shift worldwide.

10          Given -- first, are those similar numbers to what you  
11 discussed with Microsoft's counsel in her cross-examination?

12          **A.** Yes, those numbers are what we discussed.

13          **Q.** And are these numbers consistent with your -- your  
14 modeling with regards to Call of Duty given this page 11 that  
15 we just looked at?

16          **A.** Yes. Page 10 talks about AAA releases in general; and  
17 page 11, when I described the output of the share model, I note  
18 that most AAA models in the set have predicted share shifts  
19 that are actually below or within that range.

20          **Q.** I guess to tie it together to make it clear, how did you  
21 account for what we see on page 11 when determining share shift  
22 for Call of Duty games or estimating -- sorry -- share shift  
23 for Call of Duty games?

24          **A.** Well, I note that in page 11 it says -- or the share model  
25 predicts a title with greater software sales have higher

1 predicted shifts. And so that's why the share shift in my  
2 vertical foreclosure model for Call of Duty is a little higher  
3 than the range the 2 to 4 -- the 1 to 3 or 2 to 4 percent  
4 range.

5 You know, Call of Duty is a unicorn. It's very unique.  
6 So it's not surprising that the predicted share change from  
7 Call of Duty will be higher than the typical AAA title.

8 **Q.** Did you look at a range of potential we'll call it Call of  
9 Duty modifiers onto this -- this -- these numbers that we've  
10 just been discussing?

11 **A.** In my vertical foreclosure model I use various conversion  
12 rates that correspond to different Call of Duty share shifts,  
13 sort of around that 5 and a half percentage point number, but  
14 they're all numbers that are below the average that's predicted  
15 by my share model, which is the 8.9 percentage point number  
16 that I discussed earlier.

17 **Q.** And, generally, why do you look at all these different  
18 ranges here?

19 **A.** I think it's important to try to sort of triangulate from  
20 many sources my own independent quantitative analysis the share  
21 model as well as the survey evidence we discussed before, which  
22 I can talk a little bit more about if helpful to Your Honor.

23 **THE COURT:** Is that the survey that you didn't read?

24 **THE WITNESS:** Well, it's the survey --

25 **THE COURT:** It's a different survey.

## LEE - REDIRECT / PASTORE

1           **THE WITNESS:** It's a survey that I had a sample --

2           **THE COURT:** You had the -- did you have the underlying  
3 survey or just the slides that someone prepared summarizing  
4 what that person thought the survey said?

5           **THE WITNESS:** I had other documents.

6           **THE COURT:** About the survey?

7           **THE WITNESS:** About the survey, that's right.

8           **THE COURT:** Not just the slides?

9           **THE WITNESS:** No, I did not -- I had other documents  
10 that I read. And if you look at the slides, if you still have  
11 it, RX5053-010, and this is exactly how I used the survey  
12 information. I interpreted it as, if you'll note on the  
13 slide -- is this under seal? Do I have to talk around this?

14          **THE COURT:** What page are you looking at?

15          **THE WITNESS:** 010. 5053-010.

16          **MS. WILKINSON:** I believe that's public, Your Honor.

17          **THE COURT:** It is or is not?

18          **MS. WILKINSON:** It is. RX5 -- are you talking about  
19 RX5053?

20          **THE COURT:** Yes.

21          **MS. WILKINSON:** Yes, that slide is public.

22          **THE WITNESS:** And so you'll notice this slide it says  
23 it's more informative as to how the withholding of COD would  
24 impact Sony, and it actually has this diagram of all potential  
25 folk who would purchase the PlayStation at their next major

1 console purchase. And the number there is 5.3 percent.

2 I will note two slides earlier, Your Honor, it talks about  
3 how the sample -- this number is about all PS gamers, not just  
4 those who list Call of Duty as their favorite game.

5 And this 5.3 percent, I will point out, again is coming  
6 from users in Europe where Call of Duty is less popular. My  
7 conversion rate of 20 percent corresponds to 5 percent of all  
8 PlayStation users purchasing a new Xbox, which is consistent  
9 with this number and also is meant to be from a global  
10 population where Call of Duty might be more popular than in  
11 Europe.

12 **THE COURT:** Was the amount -- the number of gamers  
13 surveyed statistically significant? Or you don't know?

14 **THE WITNESS:** I can't answer that question.

15 **THE COURT:** So we don't know because you haven't seen  
16 the underlying survey data. I mean, you know that. You're a  
17 scientist. You're esteemed; right? I mean, usually you would  
18 need to know. You would need to know what the underlying  
19 statistics were before you can draw some conclusion from it;  
20 right?

21 I mean, if you can't tell me if that's statistic -- I  
22 understand --

23 **THE WITNESS:** Yeah.

24 **THE COURT:** -- this is what Microsoft posited to you.

25 **THE WITNESS:** Has represented, yeah.



## LEE - REDIRECT / PASTORE

1           **THE COURT:** I get that. So if you want to say, "Well,  
2 it's an admission, therefore" --

3           **THE WITNESS:** You're --

4           **THE COURT:** -- then that's fine.

5           **THE WITNESS:** Your Honor --

6           **THE COURT:** It's an admission; right?

7           **THE WITNESS:** Your Honor, I take that point. So  
8 that's why I'm presenting other evidence. This is one of many  
9 pieces of evidence I present. In my share model I note  
10 predicts, you know, results that are consistent with  
11 documentary evidence.

12           **THE COURT:** Right, okay.

13           **THE WITNESS:** And the survey is -- it's additional  
14 support, but --

15           **THE COURT:** This is what Microsoft said, but you don't  
16 even know if it was statistically significant?

17           **THE WITNESS:** I'm using Microsoft's representation  
18 saying it's consistent but relying on other pieces of evidence,  
19 correct.

20 **BY MR. PASTORE:**

21 **Q.** I want to pivot a bit from consoles, which I think we've  
22 been talking about a lot, to content library subscription  
23 services.

24 And just generally, Professor Lee, can you explain the  
25 evidence that supports your conclusion that the merged entity

1 would likely foreclose Activision content in the content  
2 library subscription services market?

3 **A.** So my conclusion it would be more likely because of the  
4 merger ban absent the merger to engage in foreclosure of  
5 Activision content and content library services and cloud  
6 streaming services.

7 And that comes from a few sources of evidence analysis.  
8 One is that I conclude the merged entity would have a greater  
9 economic incentive to engage in foreclosure, and this is for  
10 the reasons we discussed already: Foreclosure, taking content  
11 exclusive, tends to steer consumers away from rival products to  
12 your own and Microsoft earns profits from the sale of its  
13 services.

14 As well as documentary evidence that exclusivity in  
15 subscription service and cloud streaming is a practice that  
16 Microsoft engages in, and there are documents expressing a  
17 tendency not to supply rivals in these markets with its own  
18 first-party content.

19 **Q.** And I know you talked about this earlier with Microsoft's  
20 Counsel, but can you explain for Her Honor why you didn't do a  
21 quantitative model as part of your analysis with regards to  
22 content library subscription services?

23 **A.** I did note earlier there's this other evidence that  
24 suggests Microsoft has an incentive to continue foreclosing  
25 rivals. In many of their dual analysis they don't incorporate

1 supplying content to rival subscription or streaming services.  
2 That's just -- that's just a practice that I've seen to be the  
3 case.

4 In terms of my economic conclusion that it will be more  
5 likely to supply rivals in these markets, it comes from the  
6 conclusion that it just has a greater incentive to do so.  
7 Activision has a greater incentive to supply rivals but for the  
8 merger than with the merger.

9 **Q.** Just to be clear, I have a similar question for you for  
10 cloud gaming services.

11 Could you describe -- explain the evidence that supports  
12 your conclusion that the merged entity would likely foreclose  
13 Activision content in cloud gaming services?

14 **A.** So it would have a likely economic incentive to  
15 foreclosure in cloud gaming services for some of the reasons I  
16 described before.

17 There's this documented evidence that Microsoft has a  
18 desire to keep its first-party content off rival cloud  
19 streaming services and continue engaging in that practice.

20 **Q.** Sorry, Dr. Lee -- Professor Lee, to stop in the middle of  
21 the cloud gaming services question, but I want to make sure  
22 that Her Honor understands the point about quantitative  
23 modeling with regards to content library subscription services.

24 I understand that you analyze a lot of different evidence,  
25 but why in particular was doing a quantitative analysis in the

1 content library services market not something you performed in  
2 this matter?

3 **A.** Well, I think, you know, this is -- it's a newer market  
4 and the data wasn't as -- you know, these types of quantitative  
5 analysis often require historical data, a longer data, where we  
6 have with consoles variation in software availability and  
7 hardware sales over time. You know, content and particularly  
8 cloud it's a nascent market.

9 **THE COURT:** But cloud is very different from the  
10 subscription service.

11 **THE WITNESS:** That's right, they're different, they're  
12 both different, but they're both relatively nascent and new  
13 compared to consoles, and the lack of really good data for  
14 these services made it very difficult to perform something that  
15 I would view as reliable that's quantitative for those markets.

16 **BY MR. PASTORE:**

17 **Q.** So just so I understand, for example, the Xbox 360, that's  
18 a Generation 7 console; right? So it came before Generation 8?

19 **A.** My understanding, that's right.

20 **Q.** Is it your understanding Xbox Game Pass was available on  
21 Xbox 360?

22 **A.** It's not my understanding that Game Pass was around back  
23 then.

24 **Q.** Do you have an understanding of when Xbox Game Pass first  
25 released?

1     **A.**     In the mid-2010s. About '16 I think is my recollection.  
2     I don't know the exact date. '17 perhaps.

3     **Q.**     So that's right in the middle of Generation 8 then; right?

4     **A.**     That's right.

5     **Q.**     So I want to go back to cloud gaming. Sorry for --

6             **THE COURT:** Can we go back to --

7             **MR. PASTORE:** Yes, of course.

8             **THE COURT:** -- library subscription in terms of it  
9     being a separate market?

10            Because it seems like it's just a different way to pay for  
11   the same games. I mean, you're paying for a game to pay on  
12   your console; right? But you're paying a month -- you're  
13   paying Netflix instead of going on Prime and paying for a  
14   single or wherever, Apple, and buying the movie itself. You're  
15   paying a monthly fee and you get to play that game.

16            So why is it a different market as opposed to -- because  
17   you're playing the game exactly the same way on the console;  
18   right? You just paid for it through a different way.

19            **THE WITNESS:** It's, again, a good question.

20            **THE COURT:** Don't quit flattering me.

21            **THE WITNESS:** I'm not trying to flatter you.

22            It's a key question for defining this market; right? So  
23   how I thought about it as an economist is let's think about the  
24   products that offer cloud library services and what is the  
25   value that they're providing to consumers.

1 I provided evidence that cloud library services, they  
2 provide discovery of new games you wouldn't have tried, you  
3 would have paid \$70 to test something out. You get exposed to  
4 new games, a fresh library of content. You know, again, you  
5 can play more than you maybe would have if you could only buy  
6 the play.

7 **THE COURT:** We can debate whether that's actually a  
8 positive or a negative.

9 **THE WITNESS:** It's something that consumers appear to  
10 value; right? They're subscribing to it, and so for that  
11 reason the same hypothetical monopolist test I used for this  
12 market, let's look at all content library services. Maybe they  
13 charge \$10 a month, \$15 a month. And imagine one firm owned  
14 them all. Is it likely that they could increase prices by like  
15 5 percent, by 50 cents or a dollar per month?

16 Because think about the value proposition they're  
17 offering, these content library services. Would people really  
18 move away from those services and start just buying a la carte  
19 games? It's maybe likely that the consumers who subscribe to  
20 these services really put value on what they're delivering and  
21 it's really other content library services that consumers would  
22 substitute to.

23 You used Netflix. Think about video streaming services.  
24 If Netflix and all those other streaming services, you know,  
25 raised their prices slightly, maybe a dollar a month, would

1 people start just buying movies or buying a la carte TV shows  
2 in response? Or would it maybe be more likely they would  
3 substitute to other subscription services?

4 **THE COURT:** It depends on the content.

5 **THE WITNESS:** It depends on the content for sure, but  
6 it also depends on those characteristics like offering a  
7 library of content for a monthly subscription fee.

8 **THE COURT:** Okay.

9 **MR. PASTORE:** So going to cloud gaming now if  
10 Your Honor is ready to go with us.

11 **THE COURT:** Sure.

12 **MR. PASTORE:** Great.

13 **BY MR. PASTORE:**

14 **Q.** So, again, similar question as I had about content library  
15 subscription services, Dr. Lee.

16 Will you just please explain the evidence, you know, that  
17 supports your opinion that the merged entity would likely  
18 engage in foreclosure of Activision content with regards to the  
19 cloud gaming services market?

20 **A.** Sure. I discussed before the likely economic incentive is  
21 supported by documentary evidence I reviewed that Microsoft  
22 tends to or has expressed the incentive to withhold its  
23 first-party content from rival streaming services compared to  
24 cloud streaming services.

25 **Q.** When you say "rival cloud streaming services," what --

1 just for our, you know, edification, what does that mean  
2 compared to content library services?

3 **A.** Sure. So I think this is actually a useful distinction.  
4 Where maybe some of the analysis gets complicated is that some  
5 of the products that offer content library services also offer  
6 cloud streaming services.

7 So Game Pass Ultimate offers both content library and  
8 cloud streaming services. PlayStation Plus Premium also offers  
9 both too, and they're in some sense offering a bundle of these  
10 services.

11 So my analysis I look at a content library service market.  
12 I also look at a cloud streaming market. Now, what may be a  
13 little different is that Ultimate -- Game Pass Ultimate and  
14 PlayStation Plus Premium are in both of those markets because  
15 they both offer both of those services.

16 But the cloud streaming market also contains products that  
17 only have streaming like GeForce NOW, which is a  
18 bring-your-own-game cloud streaming service and doesn't offer  
19 at the moment content library services.

20 **Q.** I just want to maybe visualize this, call your attention  
21 to a few demonstratives -- these are public -- pages 21, 22,  
22 and 23, a series of Venn diagrams.

23 Professor Lee, does this represent your conclusions with  
24 regards to the content and cloud gaming services market than  
25 the narrow markets that are also incorporated into --



1     **A.**    That's right.

2            So on -- starting on page 21, Your Honor --

3            **THE COURT:**   I have it.

4            **THE WITNESS:**  -- that is the broader market.  This is  
5    what I call the content and cloud gaming services market.  It  
6    includes products that offer either cloud streaming or content  
7    library services for games that are primarily played in  
8    nonmobile devices.

9            But as you'll see there, it's kind of a Venn -- it is a  
10   Venn diagram.  At the intersection are those products that  
11   offer both content library and cloud streaming services.  Now,  
12   that's the broadest market.

13           On the next two pages are the narrower markets.  That's  
14   the content library services market and that's the cloud gaming  
15   services market; and as I mentioned before, there are products  
16   that are in both of those markets because they offer both of  
17   those services.

18   **BY MR. PASTORE:**

19   **Q.**    Okay.  And I think you mentioned before we got diverted --  
20   before we move back to cloud -- sorry.

21           When we were initially discussing cloud gaming services, I  
22   think you mentioned nascency, the cloud gaming services are  
23   nascent.  What -- what did you mean by that?

24   **A.**    So the word "nascent," I'm using it as a term to refer to  
25   a relatively new market, one that's developing, one that is

1 perhaps showing potential for growth but there's uncertainty.  
2 And nascent markets just tend to have, again, greater  
3 uncertainty than more mature markets.

4 **Q.** Does that -- and you touched on this, but just to put a  
5 pin on it, does that nascency make it more difficult to  
6 quantify the likelihood of harm in, say, the cloud gaming  
7 services market?

8 **A.** It does. Quantification, you know, there's always never  
9 been uncertainty when uncertainty is exacerbated because the  
10 nascency is going to be even harder.

11 I will note that the nascency also affects the conclusions  
12 about the harm. In nascent markets, the role that's smaller  
13 players that entrants have in competition could be greater than  
14 in markets that are more mature.

15 And so if smaller players of entrants are disadvantaged  
16 because they can't get access to content, then harmful  
17 foreclosure could be magnified in the future.

18 **Q.** We talked about the entrants. Does the nascent nature of  
19 the market affect, you know, the amount of entrants that could  
20 enter?

21 **A.** The cloud market has seen recent entry, also recent exit.  
22 It's different than the console market than we've seen  
23 basically three players for quite a while now.

24 **Q.** Have you seen evidence that the industry believes that  
25 there is a future in cloud gaming?

1   **A.**    I note again it's uncertain, but there are industry  
2   projections that provide evidence of that, that cloud gaming is  
3   growing. It might be a very significant part of gaming and  
4   going forward.

5   **Q.**    Okay. Just a few more questions.

6           I want to focus -- turn to modeling now, which I will try  
7   to keep up with you here.

8           But you talked about two inputs to your vertical  
9   foreclosure model, and one of them was LTV or lifetime value.  
10   Do you remember that?

11   **A.**    I do remember that.

12   **Q.**    So what is your basis, you know, for your conclusion that  
13   the LTV value for Call of Duty gamers would be more profitable,  
14   you know, for Xbox than your average Xbox gamer?

15   **A.**    Sure. So I looked at spending data on both Xbox and  
16   PlayStation, and I compared spending for all users and compared  
17   it to spending for people who play Call of Duty or -- and as  
18   well as other Activision content, and I found that for the  
19   average user who plays Call of Duty --

20           **MS. WILKINSON:** I object, Your Honor. I just want to  
21   make sure he doesn't reveal the numbers.

22           **THE WITNESS:** Understood.

23           **THE COURT:** They spend more.

24           **THE WITNESS:** They spend more. Indeed, they do spend  
25   more. And that's consistent with other documentary evidence

1 I've seen where Microsoft had studied what the value of  
2 customers who join Xbox to play particular content, and that  
3 also found that consumers who join for content spend more.

4 I think what's also interesting in my analysis is that  
5 consumers who actually play more Call of Duty, the ones who  
6 play more hours of Call of Duty, spend even more. And as  
7 economists, when you think about the value that consumers get  
8 from a product, I think it typically is correlated with the  
9 time spent on that activity.

10 So if a user spends 10 hours, 50 hours, a hundred hours a  
11 month on Call of Duty, they're probably getting more value from  
12 it because they're looking at all the hours they spend on Call  
13 of Duty. And then if it's foreclosed, you know, is it worth it  
14 to buy a \$500 Xbox Series X, let's say?

15 And so the fact that gamers who spend more time on Call of  
16 Duty spend even more suggests that the -- this LTV adjustment I  
17 used is perhaps conservative; that actually folks who come over  
18 to Xbox when Call of Duty is foreclosed would be even more  
19 valuable.

20 **BY MR. PASTORE:**

21 **Q.** Okay. And your vertical foreclosure model, I think you  
22 mentioned that, you know, there are some potential benefits to  
23 foreclosure that are not contained within that model, unmodeled  
24 benefits so to speak.

25 What are some examples of these unmodeled benefits and how

1 they affect the analysis?

2 **A.** Of course. So the vertical foreclosure model focuses only  
3 on these users who are projected to have purchased Call of Duty  
4 in the future.

5 Now, when titles are taken exclusive and, let's say, Call  
6 of Duty is not on the PlayStation, now it's on Xbox, it may be  
7 that beliefs of future consumers change. Like, so consumers  
8 who may not have bought Call of Duty but now think Xbox is  
9 where you want to go for great content, their decisions can be  
10 influenced.

11 And that's going to bring even more profits to Microsoft  
12 from this foreclosure action. That's not in the vertical  
13 foreclosure model.

14 As well, if you think that taking away Activision content  
15 from Sony reduces how much Sony earns on a user, it's less  
16 profitable to sell the console; right? Because Sony is not  
17 making money on Activision consent, let's say. Then Sony might  
18 have less of an incentive to subsidize a console, and that's  
19 going to put upward pressure on the prices of PlayStation  
20 consoles and that could shift more sales to Xbox as well as not  
21 accounting for the possibility that this foreclosure could  
22 enhance Microsoft's market power and ability to increase prices  
23 further.

24 So these are all things that are outside of the vertical  
25 foreclosure model that represent additional benefits that

1 potentially could accrue to the merged firm.

2 **Q.** So say your vertical foreclosure model shows a hundred  
3 percent recruitment, so even, break even, what's the practical  
4 implication of these unmodeled benefits on that percentage?

5 **A.** So the fact that the model doesn't account for that means  
6 that the recruitment could actually be below a hundred percent  
7 and that it would still be in the merged firm's economic  
8 interest to engage in foreclosure.

9 **Q.** So it could be 91 percent say? 92 percent?

10 **A.** It could be lower than a hundred percent, and there's  
11 evidence that these other benefits Microsoft recognized in  
12 documents, in other analyses of exclusivity, particularly with  
13 regards to the ZeniMax transaction, some of these unmodeled  
14 benefits were mentioned.

15 **THE COURT:** When you look at benefits, do you also  
16 look at potential detriments to going exclusive in terms of  
17 negative public reaction?

18 **THE WITNESS:** I did consider that; right? There are  
19 some other costs, let's say, that I considered. For example, I  
20 think one consideration is, well, maybe Call of Duty is  
21 multiplayer and so maybe there's a benefit to having a wider  
22 user base play the game. These are called network effects;  
23 right?

24 And, you know, as a matter of economics, it could be that  
25 these networks effects are diminishing so as long as you have a

1 big enough group, maybe having more people on the game doesn't  
2 deliver that much more value, but it still was interesting to  
3 see: Is there evidence that suggests they're just so big that  
4 would be additional cost to taking the game exclusive?

5 Well, I noted, you know, that there are popular  
6 multiplayer games on Xbox that are exclusive; right? And if  
7 you think that network effects are really important, really,  
8 really important, would that be enough to offset the benefits  
9 from exclusivity?

10 **THE COURT:** I guess my question was different --

11 **THE WITNESS:** Okay.

12 **THE COURT:** -- and it's Call of Duty specific because  
13 it has been around on these two platforms for a while, and I've  
14 heard some people feel very strongly about the particular  
15 console that they use. And it's been suggested that there  
16 would be just reputational damage due to making it exclusive  
17 and, again, because we're talking about a franchise that's very  
18 unique. Did you take that into account?

19 **THE WITNESS:** I understood. I took it into account.  
20 I just couldn't find evidence that gave me a good sense of how  
21 large the magnitude would be.

22 I will note that my vertical foreclosure model once you  
23 account for all the conservative inputs, predicts pretty  
24 substantial benefits, economic benefits, to taking it  
25 exclusive. So if there is a reputational hit, it would need to

1 be fairly significant to kind of change the overall finding  
2 that it would be -- wouldn't be in the economic interest of the  
3 merged firm.

4 **BY MR. PASTORE:**

5 **Q.** Just a couple final questions, Professor Lee.

6 Ms. Wilkinson went through a chat with you towards the end  
7 of her cross about predicting the future. Is your analysis  
8 predicting precisely what will happen in the future?

9 **A.** No, it does not. As we discussed, the future is  
10 uncertain, both the but-for world and the world with the merger  
11 are uncertain, but that doesn't mean it's not possible to  
12 obtain economic conclusions about likely competitive effects.

13 I think one of my conclusions is that foreclosure is more  
14 likely with the merger than but for the world; and when you  
15 have that relative comparison, it's possible to obtain  
16 conclusions of likely economic harm; right? If it's more  
17 likely, an anticompetitive effect will happen or it's more  
18 likely consumers will be harmed -- right? -- across various  
19 states of the world as we look out forward.

20 **Q.** So this is economic incentive you're considering here;  
21 right? Can you just explain the difference between economic  
22 incentive versus what will happen in the future?

23 **A.** That's right. Again, I'm an economist. I'm focusing on  
24 the economic incentives of the firms. And, you know, firms  
25 tend to act on their economic incentives; but also, like



1 there's some uncertainty with cloud and content library  
2 services because of their nascency; right?

3 And, you know, with cloud gaming because there's that  
4 uncertainty, it may not be as -- it's very difficult to put a  
5 precise probability on, you know, let's say Activision  
6 supporting or not supporting cloud streaming but for the  
7 merger.

8 But, you know, cloud continues to grow, it continues to be  
9 a really attractive place for consumers to access games, and  
10 the gains from trade of seeing an independent Activision on a  
11 streaming service grows as well. Then it becomes more likely  
12 that but for the merger, we would see Activision content on  
13 streaming services.

14 **Q.** That's purely because of objective economic incentives;  
15 right?

16 **A.** Exactly. If there are economic gains from trade and they  
17 grow large, it's in the economic interests of parties to come  
18 to an agreement.

19 **MR. PASTORE:** I have no further questions, Your Honor.  
20 Thank you.

21 **MS. WILKINSON:** I don't have -- I don't have any  
22 questions, Your Honor.

23 I'd just like to move in some of the exhibits.

24 **THE COURT:** Oh, sure.

25 **MS. WILKINSON:** RX20, which is the agreement between

## LEE - REDIRECT / PASTORE

1 Sony and Activision on Call of Duty.

2 2069.

3 I'm not going to say all what they are because I think  
4 they're confidential.

5 PX1136.

6 I believe we already moved in 5053 and 5054, which were  
7 the survey documents.

8 **THE COURT:** Yes.

9 **MS. WILKINSON:** We want to move in RX2073, which is a  
10 Sony document; RX2098, which is a Sony document.

11 **THE COURT:** Admitted.

12 (Trial Exhibits 20, 1136, 2069, 2073, and 2098  
13 received in evidence.)

14 **THE COURT:** All right.

15 **MR. PASTORE:** Sorry, Your Honor.

16 **THE COURT:** Oh, you have some too.

17 **MR. PASTORE:** I have some too.

18 **THE COURT:** Sure.

19 **MR. PASTORE:** Apologies. I'd like to admit PX5000.

20 **THE COURT:** That's the report?

21 **MR. PASTORE:** Yeah, his initial report.

22 **MS. WILKINSON:** Your Honor, just I just have a  
23 question. Normally in federal court we don't admit the  
24 underlying reports of the experts. Should -- do you want those  
25 and should we then include ours?

## PROCEEDINGS

1           **THE COURT:** Well, include them all. It's a bench  
2 trial.

3           (Trial Exhibit 5000 received in evidence.)

4           **MS. WILKINSON:** Okay. Great. Thanks.

5           **MR. PASTORE:** And, Your Honor, there are quite a  
6 number of exhibits here, and it's really -- it's reflective of  
7 a lot of the --

8           **THE COURT:** These are the exhibits attached to the  
9 declaration of --

10          **MR. PASTORE:** To the declaration, yeah.

11          **THE COURT:** Okay. We'll discuss that later.

12          **MR. PASTORE:** Okay. Thank you, Your Honor.

13          **THE COURT:** Okay. Professor Lee, you may step down.

14          **THE WITNESS:** Thank you.

15                       (Witness excused.)

16          **THE COURT:** It's 2:00 o'clock or almost, so why don't  
17 we take a ten-minute break. Is your next witness live or by  
18 video?

19          **MR. WEINGARTEN:** I'm going to check on the video  
20 during the break, Your Honor.

21          **THE COURT:** Okay. All right.

22                       (Recess taken at 1:59 p.m.)

23                       (Proceedings resumed at 2:32 p.m.)

24          **THE CLERK:** Court is back in session.

25           Are we ready for video?

1           **MR. WEINGARTEN:** Yes.

2           **THE COURT:** Okay. We're back on the record.

3           And is the FTC ready to call your next witness?

4           **MR. WEINGARTEN:** We are, Your Honor. We have a  
5           nine-minute video featuring Mr. Eisler of Nvidia.

6           And then we don't want to make any mistakes with the  
7           Nvidia confidential info so I believe Defendants will be ready  
8           to call their expert, Dr. Bailey, and then we can do  
9           Mr. Fisher --

10          **THE COURT:** Tomorrow.

11          **MR. WEINGARTEN:** -- at the end of the day or tomorrow.

12          **THE COURT:** Great. Okay. We will watch the video,  
13          then, of Mr. Eisler's deposition.

14                   (Video was played but not reported.)

15          **MR. WEINGARTEN:** Thank you, Your Honor.

16          My colleague Ms. Callan has some documents to move into  
17          evidence.

18          **THE COURT:** Okay. Great.

19          **MS. CALLAN:** Your Honor, I'd like to move to admit the  
20          exhibits used in Mr. Eisler's designations into evidence.  
21          That's PX8000, PX3103, PX3104, PX3144, PX3052, PX2391, PX1781,  
22          and I'll also move to admit the deposition transcript PX7060.

23          **THE COURT:** All right. Admitted.

24                   (Trial Exhibits 8000, 3103, 3104, 3144, 3052, 2391,  
25                   1781, and 7060 received in evidence.)

**BAILEY - DIRECT / KILARU**

1           **THE COURT:** So now we're going to call a witness out  
2 of order.

3           **MR. WEINGARTEN:** Yes, Your Honor.

4           **MR. KILARU:** That's right, Your Honor. Defendants  
5 call Dr. Elizabeth Bailey.

6           **THE COURT:** Dr. Bailey, if you can stop right there  
7 and Ms. Means will swear you in.

8           **THE CLERK:** Can you please raise your right hand?

9                           **ELIZABETH MEEKER BAILEY,**  
10 called as a witness for the Defendant, having been duly sworn,  
11 testified as follows:

12           **THE CLERK:** Please state your name for the record.

13           **THE WITNESS:** Sure. It's Elizabeth Meeker,  
14 M-E-E-K-E-R, Bailey.

15           **THE COURT:** You can be seated now.

16           **MR. KILARU:** Your Honor, may I approach to give --

17           **THE COURT:** You may.

18                           **DIRECT EXAMINATION**

19           **BY MR. KILARU:**

20           **Q.** Good afternoon, Dr. Bailey.

21           **A.** Good afternoon.

22           **Q.** Could you please introduce yourself to Her Honor?

23           **A.** Sure. Good afternoon. I'm Liz Bailey. I'm a Ph.D.  
24 economist.

25           **Q.** Are you ready to continue our day of economics here,

## BAILEY - DIRECT / KILARU

1 Dr. Bailey?

2 A. I am.

3 Q. What brings you to court today?

4 A. I was asked to consider some of the economic issues that  
5 have arisen in this matter.

6 Q. And were you ultimately able to reach some opinions that  
7 you're prepared to offer to the Court?

8 A. Yes, I was.

9 Q. Well, before we offer those opinions, let's just do a  
10 little bit of background.

11 Where did you go to school?

12 A. I did my undergraduate at Colgate University in upstate  
13 New York, and I did my Ph.D. at MIT in Cambridge,  
14 Massachusetts.

15 Q. And do you teach, Dr. Bailey?

16 A. I do -- I have until recently, yes.

17 Q. Where at?

18 A. I've taught at Arizona State University. I've taught at  
19 the University of California Berkeley in the Haas School of  
20 Business, and most recently I've taught executives at the  
21 Wharton School.

22 Q. And have you published articles in the field of economics?

23 A. Yes, I have.

24 Q. Where do you work today?

25 A. I work at Charles River Associates. I'm a vice president

1 in the competition practice.

2 Q. What type of work do you do?

3 A. I provide economic analysis on a wide variety of mergers  
4 and acquisitions.

5 Q. Dr. Bailey, turning your attention to this case, when did  
6 you first get retained?

7 A. About a year ago. Roughly this time a year ago.

8 Q. And are you being compensated for your work on this  
9 matter?

10 A. Charles River Associates is compensated at \$1200 an hour  
11 for my time.

12 Q. Any aspect of your opinions tied to that compensation?

13 A. No, it's not.

14 Q. One last question. This case is about video games. Do  
15 you play video games at all?

16 A. I play video games when my son -- sometimes when my son  
17 asks me to play with him.

18 Q. Dr. Bailey, do you feel that you had all the information  
19 you needed to reach economic opinions in this case?

20 A. I do.

21 Q. And we're going to show some slides today. Have you had a  
22 chance to review these slides before we came to court?

23 A. Yes, I have.

24 Q. Anything in here that's not contained in your report?

25 A. No.

1 Q. Well, could you give a brief overview of the types of  
2 information that you reviewed in coming to your opinions?

3 A. Sure. So I reviewed a -- a wide variety of materials  
4 in -- in this matter. One of the starting spots for me was  
5 telemetry data, and I had that available to me from Microsoft,  
6 from Activision, as well as from Sony.

7 I reviewed a wide variety of third-party data sources. Do  
8 you mind if I --

9 Q. Yes, I do.

10 MR. KILARU: Ms. Means, can we turn on the monitors,  
11 please?

12 (Pause in proceedings.)

13 THE WITNESS: (Witness examines document.) I reviewed  
14 a wide variety of third-party data sources, Nielsen data, a  
15 data source called SuperData, a third-party data source called  
16 Statista which contained data on video game revenues, a data  
17 source called Metacritic that contained data on ranking and  
18 scores of video games, as well as I reviewed and used in my  
19 analyses internal data on finances and sales from both  
20 Microsoft and Activision.

21 MR. KILARU: And just for the record, a few of these  
22 slides are marked in camera, but I believe the ones that aren't  
23 we can publish if that's okay, Your Honor.

24 THE COURT: Yes, you may.

25 MR. KILARU: Okay.



## BAILEY - DIRECT / KILARU

1           **THE COURT:** They're demonstratives; right?

2           **MR. KILARU:** Yes. We'll be cautious about that.

3           **BY MR. KILARU:**

4           **Q.** Dr. Bailey, you mentioned a couple of types of data that I  
5 just want to follow-up on in particular.

6           What is telemetry data?

7           **A.** Sure. So I think the simple way that I think about  
8 telemetry data is a -- is a log or record of the activity  
9 that -- or the characteristics of the -- of the console.

10          **Q.** Was that data anonymized before you looked at it?

11          **A.** It was. So it was anonymized. It didn't contain any PII,  
12 which is personally identifiable information.

13          **Q.** And just one other. There's a category on here called  
14 Nielsen SuperData. What is that?

15          **A.** Sure. So in -- in this matter one of the things that has  
16 been referred to by Dr. Lee and others are what are called AAA  
17 games, and I know there's a -- I don't know, I guess I think  
18 about it a little bit like you know it when you see it. Like,  
19 there's a lot of different views around what is a AAA game, but  
20 this was a data source that provided its rankings of what  
21 was -- what they viewed as AAA or AA, and so I use that as a  
22 way of kind of getting my arms around what people were talking  
23 about.

24          **Q.** Beyond data, did you look at documents, testimony, that  
25 kind of thing?

1 A. Yes, I did.

2 Q. Were you ultimately able to reach some economic opinions  
3 in this case?

4 A. I did. I had three main opinions in this matter.

5 Q. And were each of those opinions reached to a reasonable  
6 degree of certainty in your field?

7 A. Yes, they were.

8 Q. And did you have sufficient facts and data to reach those  
9 opinions?

10 A. Yes, I did.

11 Q. Let's walk through what those three opinions are if you  
12 could.

13 A. Sure. So my first is that Call of Duty is not essential,  
14 critical, must have, or uniquely important.

15 And, Your Honor, I heard the word "unicorn" this morning.  
16 I'm going -- if I had space to add another word, I would put  
17 "unicorn" in there. It's not a unicorn.

18 My second is that Dr. Lee's markets are too narrow and  
19 don't align with market realities.

20 And the third is that the transaction will expand the  
21 availability of Activision games.

22 Q. And just to be clear, when you talk about Dr. Lee's  
23 market, are you talking about products, geography, or both?

24 A. I'm talking about both.

25 Q. Well, before we get into those specific opinions, it might

1 be helpful to just take a step back and talk about gaming more  
2 generally.

3 We've heard about console gaming, PC gaming, and mobile  
4 gaming. Did you look at any data to see how users break down  
5 across those three different platforms?

6 **A.** I did. So there's essentially I think about it as three  
7 sources of -- of hardware on which gaming happens, and mobile  
8 is the largest. It's about 70 percent. What I'm showing here  
9 is global gaming revenue from 2021, and mobile gaming is nearly  
10 150 billion. About 70 percent.

11 And then lagging behind that is gaming on PCs at about  
12 33 billion and then console gaming at 28 billion.

13 **Q.** And were you able to assess that these proportions between  
14 mobile, console, and PC have been changing over the years?

15 **A.** I did. I had this data over time. This is a snapshot for  
16 one year. And then what I do on this chart is that middle bar  
17 is the same data as the previous chart, and now I'm just  
18 showing it over time.

19 So starting at 2017, then the 2021 data we saw before,  
20 moving forward to 2026. And mobile gaming is the fastest  
21 growing segment. All of the gaming is growing, but mobile is  
22 growing the fastest so, as a result, both PC gaming and console  
23 gaming are shrinking as a percent.

24 **Q.** And we've heard some testimony that part of Microsoft's  
25 motivation for this acquisition was getting a position in

1 mobile. Were you able to form an assessment of Microsoft's  
2 current position in mobile gaming?

3 A. I was. I had data available to do that.

4 Q. And what did you find?

5 A. Sure. So on the -- on the left-hand side on this -- on  
6 these pie charts, the one with all the dark blue, today Xbox is  
7 a very tiny sliver, less than half a percentage, of mobile  
8 gaming revenue.

9 Q. And how, if at all, will that change if the transaction  
10 goes through?

11 A. Well, not very much because Activision Blizzard is also  
12 very small in mobile gaming. So combined they'll have a  
13 3.8 percent share.

14 Q. Were you here in court for the testimony of Dr. Lee?

15 A. I was here.

16 Q. And did you have a chance to review his written testimony  
17 as well?

18 A. I did.

19 Q. Did he do any analysis of how this transaction will affect  
20 competition in the mobile market?

21 A. No, he did not.

22 Q. How about in the PC segment?

23 A. I think largely, no. He didn't include PC in his relevant  
24 product markets. I don't want to give it a flat no because I  
25 did hear him talk about some of the reasons why he didn't

1 include PC, but it wasn't a focus of his work.

2 Q. Well, we'll probably talk about this more later, but is it  
3 a point of disagreement between you and him as to whether PCs  
4 should be considered at part of the competitive assessment in  
5 this case?

6 A. I think so. The evidence that I've reviewed says PC is a  
7 competitive constraint.

8 Q. Okay. Let's turn to console gaming, which I think is  
9 where most of the focus was this morning.

10 Did you do any analysis of the role that Activision's  
11 content plays in console gaming?

12 A. I did.

13 Q. And what did you find?

14 A. So this is a -- a chart from my report and then turned  
15 into a pie chart on the left-hand side. Then just kind of to  
16 orient, the pie chart just takes -- the wedges are the shares  
17 coming off the table and the table on the right-hand side gives  
18 the ranking of the publishers, their global share of console  
19 gaming.

20 Q. And where does Activision fall in the pie chart or in the  
21 list?

22 A. So Activision's fifth on the list with a 7.4 percent share  
23 of console gaming.

24 Q. And do you know if all of Activision's revenues here come  
25 from Call of Duty?

1   **A.**   No, they don't all come from Call of Duty. Activision has  
2   other video game content.

3   **Q.**   Where does Xbox Game Studios fall on this list?

4   **A.**   So they're the second yellow bar. They're eighth on this  
5   list with 4.9 percent share.

6   **Q.**   And just to be clear, in your assessment of Xbox, are you  
7   including the Bethesda studios that we've heard about?

8   **A.**   Yes, that's included here.

9   **Q.**   And just one last, Doctor. Where does Sony fall in this  
10   chart?

11   **A.**   Sure. So Sony is right -- right -- one step higher than  
12   Activision Blizzard. They are at number four with the 7 and a  
13   half percent share.

14   **Q.**   And what does this analysis of global console shares tell  
15   you about Activision's content?

16   **A.**   Well, for me as -- in one of the things that Dr. Lee  
17   focused on was the uniqueness or the importance of Activision  
18   Blizzard, and so this was a very useful starting point for me  
19   to get my arms around that question of: Was there something  
20   unique and special about the way it's positioned in console  
21   gaming revenues?

22       And, you know, when I look at this pie chart, there are --  
23   there are four other larger publishers above Activision  
24   Blizzard. It -- I mean, it's obviously not the end of the  
25   analysis, but it was where I started and I found it an

1 informative starting point.

2 Q. Doctor, I noticed at the very bottom -- it can be a little  
3 hard to see on the monitor -- there's a category of "All Other  
4 Publishers" and I think it has over 3900. Do you see that?

5 A. I do.

6 Q. Or over 3.9 billion in revenue.

7 What does that tell you about the industry, whether it's  
8 concentrated or not?

9 A. Well, it's quite unconcentrated. That all others is very  
10 fragmented. I mean, this list already is fragmented, but that  
11 group of all others is a very long tail of other console gaming  
12 publishers.

13 Q. I see that this is a chart based on global data, and I  
14 think we'll come back to that.

15 Did you look at any other sort of slices of this  
16 publishing data as well?

17 A. I did. I mean, I was trying to get my arms around kind of  
18 the perspective that Dr. Lee had, and so what's on this slide  
19 is Dr. Lee focuses on the United States and so I looked at that  
20 as well.

21 Q. And what did you find?

22 A. So what I -- what I have done here is really just -- the  
23 first chunk that says "Global" here, the first boxes, I'm just  
24 porting over from the previous slide so we have a point of  
25 comparison. Those are the same percentages we just talked

1 about in the top set of boxes.

2 The middle set of boxes, those are the same shares if we  
3 do that same analysis on the previous chart but now just  
4 limited to the United States. And the shares go up a little  
5 bit, but it's not -- it's not dramatically different.

6 And then the last box, I mentioned the AAA when we were  
7 talking about the Nielsen SuperData, and this is what the  
8 shares look like if you further subset the game publishing  
9 revenue to the United States and then add the further  
10 limitation of the game has to be a AAA game, and it's not very  
11 different.

12 **Q.** And could you tell the Court what the set of numbers tells  
13 you as an economist about Activision's content?

14 **A.** Well, as a starting point, it tells me that it raises a  
15 good question in my mind whether there's something unique or  
16 special or must have or unicorn-ish about Activision Blizzard  
17 content.

18 **Q.** Before we get to that, Doctor, I want to talk about this  
19 global versus U.S. issue.

20 Did you come to an opinion as to whether the market is  
21 properly limited to the United States as Dr. Lee says?

22 **A.** I did. I disagree with that.

23 **Q.** And how did you come to that conclusion?

24 **A.** Sure. So I -- I looked at a wide variety of evidence, and  
25 all of those items that I looked at, both the data and the



1 documents and the testimony, all pointed in that same  
2 direction.

3 **Q.** Was one of the first things you looked at the actual  
4 products themselves?

5 **A.** It was. So when I -- when I look at the products, one of  
6 the -- one of the features that jumped out at me is that it is  
7 the same products and the same brands and it's even the same  
8 devices that are sold around the world. They're not different  
9 devices and different brands and different products in the U.S.  
10 versus other places. It's the same, and that -- that was an  
11 informative starting point for me.

12 **Q.** So these four devices we have here -- the PlayStation, the  
13 two Xboxes, the Switch -- same here as abroad?

14 **A.** Yes. I mean, maybe subject to a different plug to plug  
15 into the socket in -- but it's the same.

16 **Q.** Did you also look at the release dates for these consoles?

17 **A.** I did. So not only is it the same products and the same  
18 brands and the same devices, but those console devices are  
19 released on the same day in the United States as the rest of  
20 the world. That's what this slide here shows, and I've  
21 highlighted in green when the dates are the same and you can  
22 see they're all green. The date -- the release dates are the  
23 same.

24 So from an economic perspective, what it tells me is that  
25 nexus of where competition is happening is it's happening --

1 it's happening certainly at a level that's broader than the  
2 United States; where those sort of production and marketing and  
3 development decisions get made, that it's a decision that goes  
4 beyond the United States.

5 **Q.** Did you stop looking at consoles or did you also look at  
6 the games that can be played on the consoles?

7 **A.** Correct. So games go with consoles so I also looked at  
8 the games.

9 **Q.** And what did you find when you looked at that?

10 **A.** Well, I found the same -- the same thing. So what this  
11 chart is showing is for Xbox, it's the top 10 popular games by  
12 play time; and what I'm showing is the release date in the  
13 United States compared to the release date in -- in the rest of  
14 the world, in a country and the rest of the world.

15 And just like the console chart, what I've done is  
16 highlighted in green where the dates are the same; and you can  
17 see for all of the top ten games, the release date is the same.

18 **Q.** Did you -- did this analysis carry on past just the top  
19 ten?

20 **A.** Oh, yeah. So in my report I have many, many, many more  
21 games and nearly all of them were also green. Yep, the same  
22 release date.

23 **Q.** Did you do a similar analysis on the PlayStation?

24 **A.** I did.

25 **Q.** What did you find there?

1   **A.**   I found the same thing. These are the top ten games by  
2   play time on PlayStation, and the release date is the same in  
3   the United States as the rest of the world. You can see  
4   they're all green.

5   **Q.**   And what did you take away as an economist from the same  
6   release dates for these games in the United States and  
7   elsewhere?

8   **A.**   As an economist, what it does is reinforce the perspective  
9   that the nexus of competition, where that -- where that  
10   competitive activity is happening is at a level that's broader  
11   than the United States.

12   **Q.**   Doctor, did you look at whether any of these games can  
13   actually be played across countries?

14   **A.**   I did.

15   **Q.**   And what did you find?

16   **A.**   So there are many console games that have cross-regional  
17   or global play, and these are multiplayer games where you play  
18   with other players. And so not only are there games where you  
19   have the ability to do that, but I also had telemetry data  
20   available to me where I could actually look to see how  
21   important it was.

22   **Q.**   Before we get to that, why does it matter that the games  
23   can be played across the world?

24   **A.**   Well, it helps reinforce why the nexus of competitive  
25   activity is global, not limited to the United States. The

1 games are more enjoyable to play when you have -- when you are  
2 matched with players with similar skills as you have; and so  
3 that ability to have a broader set of players, it matters. It  
4 matters for the enjoyability of those games.

5 **MR. KILARU:** And I think the next few slides are in  
6 camera so if we could please take off the public monitors.  
7 Thank you so much.

8 (Pause in proceedings.)

9 **BY MR. KILARU:**

10 **Q.** Doctor, you just talked about whether the games can be  
11 played across regions. Did you do any analysis of whether they  
12 actually are played across regions?

13 **A.** I did do that, yes.

14 **Q.** And without getting into the specific numbers, what did  
15 you find?

16 **A.** As I mentioned, I have telemetry data available to me  
17 from --

18 **THE COURT:** What does telemetry data mean?

19 **THE WITNESS:** Yeah. So telemetry data, I think about  
20 it as a log of the activity that's happening on a console or  
21 that the -- that -- the activity that's happening on a game.

22 So you could imagine at the extreme, like you could track  
23 every keystroke that's happening, but that's not what I have.  
24 What I have is, like, when you first turned on your console,  
25 when you first bought your console, or how long you played a

1 game. That's what I have.

2 **THE COURT:** And how do you get that data?

3 **THE WITNESS:** I asked for it.

4 (Laughter)

5 **THE COURT:** But from Microsoft?

6 **THE WITNESS:** Yes. I asked for it from Microsoft.

7 **THE COURT:** You don't have it from PlayStation?

8 **THE WITNESS:** I do have it from PlayStation.

9 **THE COURT:** Did you ask them --

10 **THE WITNESS:** Because I asked, yeah.

11 **THE COURT:** Okay.

12 **THE WITNESS:** I have it from Microsoft, I have it from  
13 PlayStation, and I have it from Activision. I think we'll talk  
14 about all of that today.

15 **BY MR. KILARU:**

16 **Q.** And, Dr. Bailey, before we get into that, are you aware of  
17 whether Dr. Lee had access to that data as well?

18 **A.** He did.

19 **Q.** What did you find looking at the telemetry data about the  
20 frequency with which games are played across the globe, if you  
21 will?

22 **A.** So there's actually -- so let me -- let me do it this way:  
23 So see the box on the slide. That percentage that's shown  
24 there is for the game Call of Duty Modern Warfare. That's the  
25 percentages of North American lobbies that had players from

1 other regions around the world.

2 And the lob -- so a lobby is the group of players who are  
3 playing a game together. So what this percentage is, is the  
4 percentages of groups of players that were playing Call of Duty  
5 Modern Warfare that had players from regions outside of the --  
6 outside of North America, North America plus players from other  
7 regions. It's a -- it's a substantial percentage.

8 **Q.** And what did that tell you?

9 **A.** Well, it reinforces why that nexus of competition and  
10 where competitive decisions get made are global, not local or  
11 limited to the United States. Because the game is more  
12 enjoyable, because the gamers are playing across regions, it  
13 makes sense that those competitive decisions are being made far  
14 broader than the United States.

15 **Q.** Doctor, did you do any further analysis on this geographic  
16 issue?

17 **A.** I did.

18 **Q.** Could you tell the Court what you did?

19 **A.** Sure. So I did a number of additional analysis because  
20 what we just looked at here is, I think about it as the  
21 outcome, kind of the observables of what's happening.

22 But that's got to be driven by something, and in part it's  
23 driven by players playing around the world on the same game  
24 together in these lobbies. But it's also driven by what I have  
25 on this slide, and that's that gamer characteristics are really

1 similar in the U.S. compared to around the world.

2 **Q.** So one of the items listed on this slide is age  
3 distribution. What do you mean by that?

4 **A.** So what I mean is that the percentage of gamers that fall  
5 into age buckets are really similar between the United States  
6 and other regions of the world. So like the percentage of  
7 gamers that are between the ages of 18 and 24 in the U.S. is  
8 really similar to the percentage of gamers between that same  
9 age bracket in other regions of the world. That distribution  
10 looks really very similar.

11 **THE COURT:** And what product market are you using when  
12 you give this? Are you talking about AAA gamers? All gamers?

13 **THE WITNESS:** So I've done it two ways. What I'm  
14 talking about here is all gamers, but I've also looked at it  
15 for Call of Duty gamers and it's -- it's the same whether you  
16 subset it like that or not.

17 **BY MR. KILARU:**

18 **Q.** How about hours distribution, which I think is the next  
19 item here?

20 **A.** Yeah. So the next on the number of hours that gamers  
21 play, that distribution looks very much the same in the U.S.  
22 versus other regions of the world too. And by game time hour  
23 distribution I mean the percentage of gamers that play like 0  
24 to 10 hours a year or 50 to a hundred hours a year. That  
25 distribution and how often groups of players play, it's very

1 similar.

2 **Q.** And following on the Court's question, is that true just  
3 for all games or is it also true for Call of Duty in  
4 particular?

5 **A.** I looked at it both ways, for all gamers and then limited  
6 to Call of Duty gamers.

7 **Q.** And were you able to determine if the same games are  
8 popular in the United States as in other parts of the world?

9 **A.** Yes. So there's -- that's also true. If you look at the  
10 most highly played games, that set of games that are most  
11 highly played in the U.S. is a very similar set to the most  
12 highly played games in other countries around the world.

13 **Q.** So taking all this evidence together, what conclusion did  
14 you reach about whether the geographic market in this case  
15 should be limited to the United States?

16 **A.** So my conclusion was that the relevant market is broader  
17 than the United States. All of this speaks to the nexus of  
18 where those important competitive decisions that are getting  
19 made, they are getting made at a broader level -- a broader  
20 level than the U.S. because the gamers are similar, because of  
21 the way the games are getting released. Those production and  
22 marketing and development decisions go beyond the U.S.

23 **Q.** So in his written direct testimony, Dr. Lee said he  
24 doesn't agree with that because if the price of a PlayStation  
25 goes up in the United States, someone won't go and buy a



1 PlayStation in Europe instead. What's your response to that?

2 **A.** Well, I mean, that's -- it's not a construct that makes  
3 sense here because of where I started; is that sometimes we  
4 think about it like that because there are all these other  
5 competitors in other regions. And if we think about broadening  
6 the market, we're bringing in other competitors, but that's not  
7 the case here. We have the same products and the same brands  
8 and the same devices being sold around the world.

9 **Q.** Well, let's turn now to --

10 **THE COURT:** I think you just need to spin that out a  
11 little bit.

12 So the price will impact in Europe? I mean, what's your  
13 conclusion that you draw from that?

14 **THE WITNESS:** So my conclusion is that when those  
15 pricing decisions get made, those production decisions, those  
16 development decisions, investment decisions, they're not made  
17 uniquely for the United States. They're made taking into  
18 account the global nature of this business.

19 **THE COURT:** Ah. Price just being one decision that  
20 they make, but all those other decisions as well are informed  
21 by what's happening around the world?

22 **THE WITNESS:** Exactly. Because those gamers interact  
23 around the world, because those gamers look similar around the  
24 world, because so much is the same, it informs that those same  
25 decisions make sense to make around the world as one decision

1 not as a million different decisions for each country.

2 **THE COURT:** Go ahead.

3 **MR. KILARU:** No, of course, Your Honor.

4 **BY MR. KILARU:**

5 **Q.** Let's turn back to Activision and to Call of Duty.

6 One of the claims we've heard in this case is that Call of  
7 Duty is essential to Sony or very important to Sony. Did you  
8 do any analysis of that issue?

9 **A.** Yes, I did a number of analyses.

10 **Q.** To follow-up on the question earlier, did you base these  
11 analyses on Sony's data?

12 **A.** Yes, I -- because this was a question that was teed up  
13 with respect to Sony, I looked particularly at these questions  
14 using the Sony telemetry data that I had available to me so  
15 that I could be answering the precise question that's at issue  
16 here.

17 **Q.** So, Doctor, for the next few slides we're going to avoid  
18 discussing any numbers and maybe try to speak about shapes and  
19 things like that.

20 But what was the first thing you looked at in trying to  
21 assess this issue?

22 **A.** Sure. So the first thing that I looked at is -- is how  
23 gamers play -- how often gamers play COD, and so -- Call of  
24 Duty. So what this chart shows, it has two boxes, and the box  
25 on the left-hand side, the one that's the dark blue one with

1 the red percentage above it, that's the percentage of gamers on  
2 PlayStation console that have never played Call of Duty.  
3 Never.

4 **Q.** As we look over on the right side, what does that box  
5 represent?

6 **A.** So that box on the right-hand side then takes the -- you  
7 know, the remaining. Those are the gamers that have played  
8 some, and I break it up into bins by how much Call of Duty  
9 they've played.

10 **Q.** And, again, without talking about the percentages, is the  
11 first bin or the first lighter blue rectangle folks who play  
12 less than 5 hours in a year in 2022?

13 **A.** That's right. That's what that first bar shows, the  
14 percentage that played less than 5 hours of Call of Duty across  
15 the entire year of 2022 on their PlayStation console.

16 **Q.** The one after that is folks who played between 5 and  
17 20 hours in a year?

18 **A.** Correct.

19 **Q.** So at most less than 2 hours a month?

20 **A.** Correct.

21 **Q.** Let's turn to the next slide, Doctor. What was the next  
22 analysis that you did?

23 **A.** So the second analysis I did to think about whether there  
24 was something uniquely important about Call of Duty on  
25 PlayStation is I -- is I wanted to think about: Those gamers

1 that were playing Call of Duty on a PlayStation console, what  
2 portion of them were only playing Call of Duty? Like, if you  
3 played Call of Duty, was that all you did? And that's what  
4 this chart or this pie chart answered.

5 And you can see that the dark blue wedge here, that's the  
6 percentage of Call of Duty gamers playing on a PlayStation  
7 console that played six or more other franchises.

8 And I don't show it here because it starts to get kind of  
9 hard to read, but there are quite a few -- a good percentage of  
10 gamers that are playing, you know, more than 10, more than 20  
11 franchises.

12 **Q.** When you use the term "franchises," what do you mean by  
13 that?

14 **A.** I mean a franchise is like a game that gets issued in  
15 different iterations over time. So Call of Duty is a  
16 franchise. It comes out as Call of Duty Vanguard and Call of  
17 Duty Modern Warfare. Different iterations of it, different  
18 versions.

19 **Q.** So dark blue is folks who played six or more franchises.  
20 What's the light blue represent?

21 **A.** The light blue is that percent of Call of Duty gamers that  
22 played two to five other franchises over the course of 2022 on  
23 their PlayStation console.

24 **Q.** How about the gray wedge?

25 **A.** Those are the ones that only played Call of Duty on their

1 PlayStation console.

2 Q. Among franchises?

3 A. Among franchises.

4 Q. We heard earlier today some statements from Dr. Lee about  
5 the relative amounts of money that Call of Duty gamers spend.  
6 Did you remember hearing that?

7 A. I did hear that.

8 Q. Did you look at any data to try to assess that or put that  
9 into context?

10 A. Yes. I had that data available to me.

11 Q. Again without discussing the details, what are we -- what  
12 are we generally looking at here?

13 A. Sure. So this is also coming from Sony telemetry data,  
14 and what I'm looking at are gamers of different franchises here  
15 and how much they spend on average in a year.

16 And so if you read the numbers at the top, those are the  
17 average spending for that -- that franchise gamer, that type of  
18 franchise gamer.

19 Q. So the highest level of spending would be the box on the  
20 far left; is that right?

21 A. That's correct.

22 Q. Lowest on the right?

23 A. That's correct.

24 Q. I see there's two entries highlighted here. What are  
25 those entries?

1     **A.**    Can I say the names?

2     **Q.**    You can say the names, yes.

3     **A.**    Okay.  So one of them is the Sony first-party game, which  
4    is an exclusive game.  It's God of War and the other one is  
5    Call of Duty.

6     **Q.**    And when you say God of War is an exclusive game, does  
7    that mean Sony publishes it just for the PlayStation and not  
8    the Xbox?

9     **A.**    That's what I mean, yes.

10    **Q.**    And does this chart show the relative disproportion of  
11    spending for that game versus Call of Duty?

12    **A.**    Exactly.  I thought that was an -- an informative  
13    comparison for me in thinking about whether there was something  
14    unique or special about Call of Duty with respect to how much  
15    those Call of Duty gamers spend.

16    **Q.**    Doctor, did you --

17            **THE COURT:**  Can I just -- by "spend" you mean buying  
18    the game and also in-game purchases?

19            **THE WITNESS:**  Yes, that's exactly right.  My average  
20    annual spend is both the game itself as well as the post-sale  
21    monetization however it happens.

22    **BY MR. KILARU:**

23    **Q.**    Doctor, did you do any analysis or try to do any analysis  
24    of the role that Call of Duty plays in informing purchase  
25    decisions of a console?

1     **A.**    Yes, I did that too.

2     **Q.**    How did you do that?

3     **A.**    So, look, I don't know why someone buys a new PlayStation  
4   console. I can't ask all of them. But as an economist, when  
5   I -- one thing I can do is think of ways that I might be able  
6   to tease that out.

7           And as I said before, I had PlayStation telemetry data  
8   available to me. So what I did is I looked at a particular  
9   window of time, and that's October -- the end of October to the  
10   end of December 2022, and that was a very good period for me to  
11   look at because there were two games that came out during that  
12   time. One was Call of Duty Modern Warfare 2 and the other one  
13   was the Sony first-party exclusive game God of War Ragnarök.

14          So looking at that period of time, as an economist, the  
15   way that I thought about this is if you really like and care  
16   about a game, it's probably going to be the game you're going  
17   to play on the first day.

18          And so what I did was in this period of time, I tabulated  
19   what games people played on their first day of play. So, you  
20   know, you imagine you plug in your console and you fire it up,  
21   and what's the first game that you play? And some people play  
22   more than one game on their first day. I should be clear about  
23   that.

24          So all I'm doing here is tabulating the percentage of  
25   times those games were played on the first day.

1 Q. Now, you said the bottom two games, Modern Warfare 2 and  
2 God of War, came out during this two-month, three-month period.  
3 Was that true of the other games represented here?

4 A. Those are the two that game out in this window. A number  
5 of the other games on this list came out in -- in -- sometime  
6 several -- several months ago or even several years ago.

7 Q. And does this chart still show that -- the levels of  
8 engagement they had despite being older games on the first day?

9 A. Yes, it does.

10 Q. And did you take anything in particular from the  
11 comparison between the Modern Warfare game and the God of War  
12 game?

13 A. Yes. So the reason that I thought that this was  
14 informative as a comparison, those two that are in yellow, was  
15 because both of those two games were recent releases; right?  
16 They -- not only, like, recent in the current time period  
17 getting to the end of 2022, but they were released roughly at  
18 the same time so that made them a useful comparison.

19 Both of those two games were bundled with a PlayStation  
20 console. And I don't mean like all together. I mean that you  
21 could get a PlayStation console that was bundled with Call of  
22 Duty Modern Warfare 2 or you could get a PlayStation that was  
23 bundled with God of War Ragnarök. When you bought the console,  
24 what came with it was the game.

25 THE COURT: They threw in a game?



1           **THE WITNESS:** Yeah, exactly. Yeah.

2           And then the third part that was useful for comparison for  
3 me is that I understand from third-party public information,  
4 that Sony put in substantial marketing investment into both of  
5 those games. So it was a useful comparison.

6           **BY MR. KILARU:**

7           **Q.** Does this chart show how often people played those two  
8 games you mentioned on the first day?

9           **A.** Exactly, right. So those percentages at the end of the  
10 bars and the length of the bars tells you how often that game  
11 was played on the first day as a proxy for how important that  
12 game was to -- to sets of gamers.

13          **Q.** Now I see on this --

14          **THE COURT:** When people bought it and it was bundled,  
15 did they have a choice of which bundle?

16          **THE WITNESS:** That's a good question.

17          **THE COURT:** In other words, was it in particular if  
18 you were buying it in Philadelphia, were you only offered  
19 God of War or Call of Duty?

20          **THE WITNESS:** I don't know the answer to that other  
21 than when we bought our PlayStation 5 -- I'm just going to give  
22 you an anecdote, which should not be like worldwide  
23 information, but my anecdote was that I -- that we made a  
24 choice between did we want the Modern Warfare 2 bundle or did  
25 we want the God of War bundle.

1           **THE COURT:** Okay.

2           **BY MR. KILARU:**

3           **Q.** Doctor, on this chart are there other games that are  
4 exclusive first-party games to Sony?

5           **A.** Yes, there are. So the lines that are in that blue color  
6 are all Sony first-party exclusive games.

7           **MR. KILARU:** And I think we can turn the monitors back  
8 on. We're out of the in-camera portion.

9                               (Pause in proceedings.)

10          **BY MR. KILARU:**

11          **Q.** Doctor, are those the only three exclusive games that Sony  
12 has?

13          **A.** No. This -- this pie chart shows that -- that -- that  
14 PlayStation has roughly three times -- a little more than three  
15 times as many exclusive games than Xbox does.

16          **Q.** Are you aware of anything stopping Sony from putting  
17 marketing dollars behind any of its other exclusive games?

18          **A.** No, I'm not.

19          **Q.** So taking all of this information together, what  
20 conclusions did you draw about Call of Duty's importance to  
21 Sony?

22          **A.** I mean, Call of Duty is -- it's an important game and it's  
23 a popular game; but based on the analyses that I did, there's  
24 nothing that suggested it is must have or essential or -- or  
25 particularly or uniquely important to Sony.

1 Q. And, Doctor, did you do any analysis of whether other  
2 gaming consoles or platforms have been able to have competitive  
3 success without Call of Duty?

4 A. Yes, I did.

5 Q. What was the first one?

6 A. So the first one I looked at was the Nintendo console  
7 between 2017 and -- I mean, this goes to 2022, but through  
8 today, that Nintendo console does not have Call of Duty, and  
9 its share has grown from 35 percent up to 46 percent.

10 Q. We'll circle back on this a little bit, but does that mean  
11 that it's in a different market because it can succeed without  
12 Call of Duty?

13 A. No, it does not mean that.

14 Q. All right. Did you also look at how important Call of  
15 Duty was to the PC platform?

16 A. I looked at that as well.

17 Q. And what did you find?

18 A. So here what I'm showing are the monthly active users for  
19 Valve, Steam. Steam is a distribution service for gaming on  
20 PC. And in 2017 Steam had -- had access -- Call of Duty was  
21 available on Steam, but it was no longer available in 2018  
22 through 2021. And what -- what this chart does is it's  
23 tracking those monthly average users on Steam over time, and  
24 you can see it continued to grow.

25 Q. And what do these last two analyses tell you about the

1 importance of Call of Duty?

2 **A.** Well, it reinforces the work that I did using the  
3 telemetry data, Sony's telemetry data; that it's consistent  
4 with there's nothing unique or special about Call of Duty in  
5 having a console or even PC be successful.

6 **MR. KILARU:** Your Honor, I see that's it 3:00.

7 **THE COURT:** Yeah. Is now a good time to stop?

8 **MR. KILARU:** We could, yes.

9 **THE COURT:** Okay. All right. We'll end the testimony  
10 today. We'll resume at 8:30 and we will continue with  
11 Dr. Bailey at that time.

12 **MR. KILARU:** Can I raise an issue about that,  
13 Your Honor?

14 **THE COURT:** Yes.

15 **MR. KILARU:** Just in terms of scheduling, we have two  
16 witnesses testifying tomorrow. Mr. Kotick and Mr. Nadella.  
17 Mr. Kotick is the CEO of Activision as you know.

18 **THE COURT:** Yes, I know.

19 **MR. KILARU:** Mr. Kotick, his schedule, we need him to  
20 testify in the morning, if that's possible.

21 **THE COURT:** You want to take him out of -- do you want  
22 to stop this witness' testimony?

23 **MR. KILARU:** Yes, and we can pick up Dr. Bailey after  
24 that if that's okay.

25 **THE COURT:** Is there any objection from the FTC?

1           **MR. WEINGARTEN:** As long as the witness remains  
2 sequestered, Your Honor, yes, it's okay.

3           **THE COURT:** Yes. The witness should not be talking to  
4 your counsel about your testimony.

5           **MR. KILARU:** And as to Mr. Nadella, we've worked this  
6 out with the government, he needs to testify at 1:00 so we'll  
7 just be a little fluid during the day. At 1:30.

8           **THE COURT:** At 1:00? At 1:30, yeah.

9           Let me tell you, I actually have to moderate a panel from  
10 12:00 to 1:00 so we wouldn't start until -- maybe we should  
11 just say we're going to have a break from 12:00 to 1:30, and  
12 we'll start with him tomorrow.

13           **MR. KILARU:** That will be great, Your Honor.

14           **THE COURT:** We'll do that for your planning purposes,  
15 and maybe we will end up having to go a little bit later in the  
16 afternoon.

17           **MR. KILARU:** And could I ask just one final scheduling  
18 issue, Your Honor? This is more for the findings of fact that  
19 are due at the end of the week.

20           Because of the time crunch, which we're all very thankful  
21 for, can we file them under seal and then file the redacted  
22 versions next week?

23           **THE COURT:** Yes. Absolutely. For both sides.

24           **MR. KILARU:** Thank you.

25           **MR. WEINGARTEN:** Same question.

1           **THE COURT:** For both sides, yes, for sure.

2           All right. Thank you. We'll see you tomorrow morning.

3                   (Proceedings adjourned at 3:06 p.m.)

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6                           **CERTIFICATE OF REPORTER**

7           I certify that the foregoing is a correct transcript  
8           from the record of proceedings in the above-entitled matter.

9  
10          DATE:     Tuesday, June 27, 2023

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